



TECHNICAL MEMORANDUM

Date: December 15, 2009

Project No.: 073-93312-03.09

To: Terry Cundy

Company: Potlatch Land and Lumber, LLC

From: Douglas Morell

RE: EPA TECHNICAL MEMORANDUM – AVERY LANDING SITE EE/CA

The purpose of this Technical Memorandum is to briefly summarize the results from the Avery Landing Site (the Site) EE/CA Investigation conducted in August and September 2009. Additionally, this Technical Memorandum is to briefly list the removal action objectives and the preliminary list of removal action alternatives. This Technical Memorandum is not to provide an exhaustive discussion of the investigation data, or the removal alternatives. The draft EE/CA report, due to EPA on January 18, 2010 will provide the detailed discussion of investigation findings and conclusions and evaluation of removal action alternatives.

1.0 DATA SUMMARY

The EE/CA investigation included the collection of soil, groundwater, surface water, sediment, and free product samples from the Site. Soil samples were collected from locations on the Site where historical data do not exist. Groundwater samples were collected from a number of existing monitoring wells and four monitoring wells installed by Golder. Surface water and sediment samples were collected along the near shore margins of the Site. Free product was collected from several monitoring wells and from several river stations. The EE/CA investigation validated data results are presented in the appended tables. The appended tables include the following:

- Table 1 – Test Pit Soil Results
- Table 2 – Monitoring Well and Boring Soil Results
- Table 3a – Groundwater Level Measurements- September 2009
- Table 3b – Groundwater Level Measurements- November 2009
- Table 4 – Groundwater Results
- Table 5 – LNAPL Results
- Table 6 – Near Shore Sediment Results
- Table 7 – Near Shore LNAPL Results

The data results presented in the tables are compared to the lowest screening level for that media. The lowest screening level was identified in the Site QAPP. Several of the screening levels have been modified since producing the QAPP. These modifications include the suspension of Idaho Default Target

Levels (IDTL) for 2-methylnaphthalene; 1,2,4-trimethylbenzene; and 1,3,5-trimethylbenzene. Also appended to this Technical Memorandum are three figures:

- Figure 1 – EE/CA Sample Locations
- Figure 2 – Groundwater Contours (9/01/2009)
- Figure 3 – Free Product Plume

2.0 TREATABILITY STUDY RESULTS:

The accompanying Treatability Study Report presents the results of a soil washing treatability study performed by ART Engineering, LLC (ART) for soil samples collected from the Avery Landing Site, Avery, Idaho (Site). Chemical analysis was performed by TestAmerica, Spokane, Washington.

A total of four (4) samples were evaluated in this study. Three (3) composite samples were collected from the saturated "smear" zone and one (1) sample (Sample TS2U) was collected from subsurface soils in the unsaturated zone. The samples evaluated in this study contain an average of 70.2% by weight gravel (>2.0 mm), 25.3% sand (0.038 – 2.0 mm), and 4.5% fines (<0.038 mm) as measured on a dry weight basis. This particle size distribution is favorable for a soil washing process. The results of this study indicate that hydrocarbon removal efficiencies for TPH-Diesel and Heavy Oil Range Hydrocarbons in the range of 96% to 97% from samples representing the "smear zone" can be achieved. For the three composite "smear zone" samples, the average hydrocarbon concentration in the washed sand product was 115 mg/kg for TPH-Diesel, and 91 mg/kg for Heavy Oil Range Hydrocarbon. The use of a surfactant improved contaminant removal efficiency for Composite #1, but did not have a beneficial effect for other samples evaluated in this study. The use of elevated temperature did not provide any significant beneficial effect.

For sample TS2U, the hydrocarbon removal efficiency in the washed sand product without flotation was 69 percent, corresponding to concentrations of 3,280 mg/kg for TPH-Diesel and 4,000 mg/kg for Heavy Oil Range Hydrocarbon. The use of flotation increased the contaminant removal efficiency for Sample TS2U to 77% by removal of asphaltic particles in the flotation concentrate. After flotation, hydrocarbon levels were 2,470 mg/kg for TPH-Diesel and 3,040 mg/kg for Heavy Oil Range Hydrocarbon. The lower contaminant removal efficiency achieved for Sample TS2U may be the result of presence of asphaltic particles which were not observed in the composite samples collected from the saturated "smear" zone.

The results of this study show that significant hydrocarbon removal can be achieved for gravel and sand fractions (totaling 95% of the soil mass on a dry weight basis) at the Site through the use of soil washing. The hydrocarbons removed in the soil washing process can be concentrated and pressed into a fines filter cake for further treatment or disposal. In this study, the wash water was successfully treated to remove soil fines and dispersed hydrocarbon. This allows for the full-scale plant to be designed as a closed-loop system in which the water is continuously treated and reused. Therefore, no water discharge

would be required during treatment, but the final wash water would require treatment before discharge or off-site disposal.

Golder is continuing to evaluate the effectiveness of the soil washing treatment. The washed soils are being subjected to a qualitative "sheen test" to observe whether an oil sheen is present when the soils are submerged in water. This same "sheen test" is also being conducted on untreated vadose zone soils. Golder anticipates that the sheen test will be completed in the following weeks.

3.0 DATA GAPS

Golder has reviewed the data obtained during the investigation phase of the Avery Landing EE/CA and data available from previous Site investigations and removal actions. As with all investigations, there are remaining uncertainties. The data collection objective was not to remove all uncertainty (this is an unattainable goal), but to collect a sufficient amount of information to adequately evaluate potential removal actions to make an informed selection of the most appropriate removal action for the Site. Many times, additional information or data are needed for the final design of a selected removal action, but this can be obtained during a pre-design phase. A Site pre-design investigation may be needed for that purpose, depending on the removal alternative that is selected.

Golder is currently performing "sheen tests" on the washed treatability soil fractions and other vadose zone soils to better understand their potential to contribute LNAPL at the Site. The "sheen tests" will be completed in the coming weeks. Golder believes that sufficient information/data exists or will be obtained in the coming weeks for the purpose of evaluating and comparing the preliminary list of removal alternatives (see Section 5), with the possible exception of in-situ soil heating (described in Section 5.1.5). Golder is currently evaluating in-situ soil heating for understanding effectiveness, restoration time frame, and power requirements under Site conditions.

In-situ soil heating is a relatively new technology for treatment of high-molecular-weight petroleum compounds. However, this technology is promising and may prove to be effective at removing or reducing impacts at the Site without disruptive excavation. Depending on the uncertainties identified in the EE/CA evaluation, a pilot test of this alternative may be necessary to select an alternative in the EE/CA.

4.0 REMOVAL ACTION OBJECTIVES

The preliminary removal action objectives (RAO) for the Avery Landing Site are as follows:

- Protect human and ecological receptors from direct contact with contaminated surface soils
- Protect human receptors from drinking contaminated groundwater
- Protect surface water from LNAPL releases

Dissolved contaminants in groundwater have not adversely affected surface water; therefore, groundwater containment or cleanup is not needed as an RAO for the protection of surface water. The draft EE/CA Report will provide a more thorough discussion of RAOs.

5.0 PRELIMINARY LIST OF REMOVAL ALTERNATIVES

In order to meet the RAOs for the Site, the following removal alternatives are proposed for evaluation in the EE/CA:

1. No Further Action
2. Institutional Controls
3. Improved Containment
4. Improved Containment and "Hot Spot" Treatment
 - a. Excavation and Treatment by Soil Washing
 - b. Treatment by In-Situ Soil Heating
5. Improved Containment and Major Source Treatment
 - a. Excavation and Treatment by Soil Washing
 - b. Treatment by In-Situ Soil Heating
6. Treatment of the Entire LNAPL Plume Area
 - a. Excavation and Treatment by Soil Washing
 - b. Treatment by In-Situ Soil Heating

Common components are discussed in the next section, followed by summary descriptions of the alternatives.

5.1 Components of the Alternatives

Remediation components used in more than one alternative are described in this section.

5.1.1 Institutional Controls

Institutional controls would consist of land use and groundwater use restrictions to prevent direct contact and ingestion by humans.

5.1.2 Improved Containment (including LNAPL Recovery)

Improved containment would consist of:

- A slurry wall for LNAPL containment
- An LNAPL recovery trench for improved LNAPL recovery
- Clean soil cover over contaminated areas

A LNAPL containment and recovery system is in place at the Site, but has proved ineffective at keeping oil from entering the river. While we do not know for sure, the apparent problem with this system is that

the plastic liner used for containment has gaps (particularly at the bottom) through which LNAPL can move.

The slurry wall would be completed to a depth below the St Joe River bed elevation and three feet above high water elevation, providing LNAPL containment under all hydrologic conditions and not having the current LNAPL seepage problem. The wall will be continuous (e.g., construction would include removal of large rocks, buried concrete and wood structures as needed). Being thicker than the current plastic, it would be more reliable (i.e., not subject to puncture). The wall would allow groundwater to flow underneath and around it to minimize changes to groundwater flow.

LNAPL recovery would be improved by installing a collection trench along the entire length of the slurry wall. Additional LNAPL recovery trenches would be placed in areas of higher contamination to speed interception. LNAPL removal would occur through risers installed at intervals along the trench.

Containment would also include a minimum 2-ft clean soil cover over any areas where impacted soil would remain.

Improved containment would protect human health and the environment as follows:

- The slurry wall would prevent LNAPL from reaching the river.
- Treatment would provide LNAPL collection, slowly cleaning the Site. At some future time there would be no more mobile LNAPL to collect, and therefore no further risk to the river.
- The soil cover would prevent direct contact with contaminated soil by human and ecological receptors.

5.1.3 Soil Washing

Soil washing would consist of excavation to remove impacted soil, as well as excavation and separate stockpiling of clean soil overburden. Excavated soil meeting criteria for requiring treatment would then be treated. The treatment consists of a combination of size separation and water washing to remove hydrocarbons from the soil. The treatment process is further described in the Treatability Study Report (ART 2009). The treatment effectiveness, based on the site-specific treatability study, is summarized in Section 2 and the accompanying Treatability Study Report.

The excavation would be backfilled with the treated soils meeting cleanup criteria, except that clean soil would be used to backfill below the water table. A 2-ft clean soil cover would be placed over the treated soils (which will still contain some residual hydrocarbons).

Soil washing would have residual filter cake (~5% of treated soil volume) requiring further treatment or off-site disposal. Further treatment could consist of on-site land treatment or thermal desorption.

5.1.4 In-Situ Soil Heating

In-situ soil heating would consist of thermal conductive heating, electrical resistance heating, or heating via steam injection. In all three of these process options, the objective would be removal of hydrocarbons from the soil without the need for excavation. Hydrocarbon removal would be sufficient to meet RAOs.

A pilot treatment study would be required for in-situ soil heating before a full-scale system could be designed.

For thermal conductive heating, heating elements would be installed in boreholes, and heat generated electrically by these elements would heat the subsurface by thermal conduction. For electrical resistance heating, anodes and cathodes would be installed in the boreholes, and the soil heated by resistance to electrical current generated in the subsurface. For steam injection, steam would be generated above-ground and injected via wells into the subsurface, which would then transfer heat to the subsurface.

The target soil temperature would be approximately 100 to 150 C. Volatilized hydrocarbons would be recovered by a soil vapor extraction (SVE) system. The SVE system would collect subsurface vapors using vacuum blowers extracting from horizontal perforated piping in shallow (5-10 ft deep) collection trenches. LNAPL would be condensed in the extracted vapors, and the offgas treated by thermal oxidation.

Hydrocarbons not volatilized would have lower viscosity and solubility due to the heating, thereby improving LNAPL recovery and prevent future LNAPL formation.

Steam injection could also be used as a means of flushing hydrocarbon from vadose zone soils (a form of in-situ soil washing). Flushed hydrocarbon would be recovered in the LNAPL recovery system.

5.2 Description of the Alternatives

5.2.1 No Further Action

In this alternative, the current containment system would remain. Current LNAPL removal operations, maintenance, and monitoring would continue. No institutional controls would be provided. This alternative will serve as a baseline for comparison to the other alternatives.

5.2.2 Institutional Controls

This alternative includes the following components:

- Continued use of the current containment system
- Continued LNAPL removal using the current system
- Institutional controls for land use and groundwater use
- Long-term maintenance and monitoring

5.2.3 Improved Containment

This alternative includes the following components:

- Institutional controls for land use and groundwater use
- Improved containment and removal of LNAPL with a new system
- Long-term maintenance and monitoring

In this alternative, protection of human health and the environment would be provided primarily by containment – a slurry wall with LNAPL recovery to keep LNAPL from the river, and a soil cover to minimize direct contact.

5.2.4 Improved Containment and "Hot Spot" Treatment

This alternative includes the following components:

- Institutional controls
- Improved containment and removal of LNAPL with a new system
- Treatment of "hot spots" in the source area
- Long-term maintenance and monitoring

Like the previous alternative, this alternative would rely primarily on containment. However, treating selected areas with the highest contamination would remove some of the source and decrease the time required for completion of LNAPL removal.

Determination of "hot spots" would be made during the removal action using the "observational approach" by means of exploratory trenches.

Treatment would be either soil washing or in-situ soil heating. These two options will be evaluated as separate sub-alternatives.

5.2.5 Improved Containment and Major Source Treatment

This alternative includes the following components:

- Institutional controls
- Improved containment and removal of LNAPL with a new system
- Treatment of soils in the major source area
- Long-term maintenance and monitoring

Major source treatment would remove the bulk of site contamination above cleanup levels, greatly decreasing the time for site cleanup to be achieved. The major source area is considered to be part of the Site with vadose zone contamination from approximately 5-foot-depth to the water table. Using the "observational approach," excavated soils would be tested in the field and segregated based on the need for treatment. A sheen test is anticipated to be a suitable field test.

Treatment would be either soil washing or in-situ soil heating. These two options will be evaluated as separate sub-alternatives.

5.2.6 Treatment of the Entire LNAPL Plume Area

This alternative includes the following components:

- Treatment of all soil above removal criteria

In this alternative, the entire area of the LNAPL plume would be excavated. Using the "observational approach", excavated soils would be tested in the field and segregated based on the need for treatment. A sheen test is anticipated to be a suitable field test. This alternative would involve excavated a large quantity of clean overburden (i.e., to reach contaminated smear zone soils outside of the major source area).

Treatment would be either soil washing or in-situ soil heating. These two options will be evaluated as separate sub-alternatives.

Institutional controls may not be required in this alternative because, upon completion of the removal action, remedial action objectives would be achieved. There may not be a need for long-term maintenance and monitoring.

TABLES

TABLE 1

Test Pit Soil Results

			Sample ID	GTP1-2.5-082709	GTP1-10.5-082709	GTP1-13.5-082709	GTP2-2.5-082709	GTP2-8-082709	GTP2-13-082709	GTP3-3.5-082709	GTP3-5-082709	GTP3-13.5-082709												
Type	Analytes	Method																						
TPH	Diesel Range Organics	NWTPH-Dx	NSA	mg/kg dry	452	8670	1630	24.7	< 11.5	< 12.7	44.2	770	23.7	25.6	11.3	< 16.1	< 16.8	774	342 J	< 11.4	9660	431		
	Heavy Oils	NWTPH-Dx	NSA	mg/kg dry	3850	12800	2900	252	< 28.8	< 31.7	209	999	61.4	145	41.9	< 40.1	< 41.9	1090	985 J	< 28.4	3150	1200		
PCBs	Aroclor 1016	8082	3.9	mg/kg dry	< 0.0096	< 0.0098	< 0.0096	< 0.0099	< 0.0097	< 0.0096	< 0.0099	< 0.0096	0.0098 UJ	< 0.0097	< 0.0099	< 0.0099	0.0098 UJ	< 0.012	< 0.0096	< 0.0096	< 0.0094	< 0.0099		
	Aroclor 1221	8082	0.17	mg/kg dry	< 0.0096	< 0.0098	< 0.0096	< 0.0099	< 0.0097	< 0.0096	< 0.0099	< 0.0096	< 0.0098	< 0.0097	< 0.0099	< 0.0099	0.0098 UJ	< 0.012	< 0.0096	< 0.0096	< 0.0094	< 0.0099		
	Aroclor 1232	8082	0.17	mg/kg dry	< 0.0096	< 0.0098	< 0.0096	< 0.0099	< 0.0097	< 0.0096	< 0.0099	< 0.0096	< 0.0098	< 0.0097	< 0.0099	< 0.0099	0.0098 UJ	< 0.012	< 0.0096	< 0.0096	< 0.0094	< 0.0099		
	Aroclor 1242	8082	0.22	mg/kg dry	< 0.0096	< 0.0098	< 0.0096	< 0.0099	< 0.0097	< 0.0096	< 0.0099	< 0.0096	< 0.0098	< 0.0097	< 0.0099	< 0.0099	0.0098 UJ	< 0.012	< 0.0096	< 0.0096	< 0.0094	< 0.0099		
	Aroclor 1248	8082	0.22	mg/kg dry	< 0.0096	< 0.0098	< 0.0096	< 0.0099	< 0.0097	< 0.0096	< 0.0099	< 0.0096	< 0.0098	< 0.0097	< 0.0099	< 0.0099	0.0098 UJ	< 0.012	< 0.0096	< 0.0096	< 0.0094	< 0.0099		
	Aroclor 1254	8082	0.22	mg/kg dry	< 0.0096	< 0.0098	< 0.0096	< 0.0099	< 0.0097	< 0.0096	< 0.0099	< 0.0096	< 0.0098	< 0.0097	< 0.0099	< 0.0099	0.0098 UJ	< 0.012	< 0.0096	< 0.0096	< 0.0094	< 0.0099		
	Aroclor 1260	8082	0.22	mg/kg dry	< 0.0096	< 0.0098	< 0.0096	0.0223	< 0.0097	< 0.0096	< 0.0099	< 0.0096	0.0098 UJ	0.0185	< 0.0099	< 0.0099	0.0098 UJ	< 0.012	< 0.0096	< 0.0096	< 0.0094	< 0.0099		
Carcinogenic PAH	Benzo(a)anthracene	8270C	0.15	mg/kg dry	0.0459	0.348	0.0737 J	0.0168	0.00820	< 0.00465	< 0.00467	0.0295	< 0.00474	< 0.00492	< 0.00500	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	0.00767	0.0130		
	Benzo(a)pyrene	8270C	0.02	mg/kg dry	0.0561	0.301	0.0259 J	0.0162	0.00769	< 0.00465	< 0.00467	0.0350	< 0.00474	0.00516	< 0.00500	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	0.00488	0.0110		
	Benzo(b)fluoranthene	8270C	0.15	mg/kg dry	0.0968	< 0.0831	0.0518 J	0.0335	0.0123	< 0.00465	0.00958	0.0627	< 0.00474	0.0117	0.00953	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	< 0.00471	0.0178		
	Benzo(k)fluoranthene	8270C	1.5	mg/kg dry	< 0.0268	< 0.0831	< 0.00495 R	< 0.00471	< 0.00461	< 0.00465	< 0.00467	< 0.00645	< 0.00474	< 0.00492	< 0.00500	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	< 0.00471	< 0.00514		
	Chrysene	8270C	15	mg/kg dry	0.0382	0.989	0.168 J	0.0178	0.00871	< 0.00465	0.00670	0.0725	< 0.00474	0.00609	< 0.00500	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	0.0153	0.0178		
	Dibenzo(a,h)anthracene	8270C	0.02	mg/kg dry	< 0.0268	0.245	0.0290 J	0.00785	< 0.00461	< 0.00465	< 0.00467	0.0154	< 0.00474	< 0.00492	< 0.00500	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	< 0.00471	0.00549		
	Indeno(1,2,3-cd)pyrene	8270C	0.15	mg/kg dry	0.0510	0.277	0.0269 J	0.0126	0.00461	< 0.00465	0.00862	0.0264	< 0.00474	< 0.00492	< 0.00500	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	< 0.00471	0.00617		
Non-Carcinogenic PAH	Acenaphthene	SIM 8270C	52.3	mg/kg dry	< 0.0268	0.498	0.00508 J	< 0.00471	< 0.00461	< 0.00465	< 0.00467	< 0.00645	< 0.00474	< 0.00492	< 0.00500	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	0.172 J	< 0.00514		
	Acenaphthylene	SIM 8270C	78	mg/kg dry	< 0.0268	< 0.0831	< 0.00495 R	< 0.00471	< 0.00461	< 0.00465	< 0.00467	< 0.00645	< 0.00474	< 0.00492	< 0.00500	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	< 0.00471	< 0.00514		
	Anthracene	SIM 8270C	1040	mg/kg dry	< 0.0268	1.55	0.198 J	< 0.00471	< 0.00461	< 0.00465	< 0.00467	0.805	< 0.00474	< 0.00492	< 0.00500	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	0.754	0.00823		
	Benzog(h,i)perylene	SIM 8270C	1178	mg/kg dry	0.0637	0.459	0.0345 J	0.0204	0.00666	< 0.00465	0.0105	0.541	< 0.00474	0.00985	< 0.00500	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	0.0209	0.0103		
	Fluoranthene	SIM 8270C	364	mg/kg dry	< 0.0268	0.150	0.0452 J	0.0257	0.00820	< 0.00465	0.00527	0.141	< 0.00474	0.00656	0.00524	< 0.00500	< 0.00447	0.0579	< 0.0254	< 0.00455	0.0914	0.0151		
	Fluorene	SIM 8270C	54.8	mg/kg dry	< 0.0268	1.41	0.0853 J	< 0.00471	< 0.00461	< 0.00465	< 0.00467	0.00984	< 0.00474	< 0.00492	< 0.00500	< 0.00500	< 0.00447	< 0.00689	< 0.0254	< 0.00455	0.207 J	0.00549		
	Naphthalene	SIM 8270C	1.14	mg/kg dry	< 0.0268	0.427	0.0818	< 0.00471	< 0.00461	< 0.00465	< 0.00467	< 0.00645	< 0.00474	< 0.00492	< 0.00500	< 0.00500	< 0.00447	0.0147	< 0.0254	< 0.00455	2.39 J	0.0185		
	Phenanthrene	SIM 8270C	79	mg/kg dry	< 0.0268	0.894</td																		

TABLE 1

Test Pit Soil Results

Type	Analytes	Method	Sample ID	GTP1-2.5-082709	GTP1-10.5-082709	GTP1-13.5-082709	GTP2-2.5-082709	GTP2-8-082709	GTP2-13-082709	GTP3-3.5-082709	GTP3-5-082709	GTP3-13.5-082709														
Semi-volatiles	1-Methylnaphthalene	8270C	22	mg/kg dry	0.023 J	< 0.41	< 0.32	< 0.36	< 0.0035	< 0.0078	0.001 J	0.012	< 0.0078	0.0086	< 0.033	< 0.0034	< 0.0032	0.016	< 0.066	0.0016 J	45	0.33				
	2-Methylnaphthalene	8270C	310	mg/kg dry	< 0.23	< 0.27	< 0.21	< 0.24	< 0.0023	< 0.0052	0.0023 J	0.013	< 0.0052	0.015	< 0.022	0.00031 J	< 0.0022	0.01	< 0.044	0.002 J	78	0.48				
	2-Methylphenol	8270C	1.8	mg/kg dry	< 1.1	< 1.4	< 1.1	< 1.2	< 0.012	< 0.026	0.005 J	< 0.026	< 0.021	< 0.11	< 0.011	< 0.020	< 0.22	< 0.011	< 0.16	< 0.028						
	3 & 4 Methylphenol	8270C	NSA	mg/kg dry	< 2.3	< 2.7	< 2.1	< 2.4	< 0.023	< 0.052	< 0.044	0.066	< 0.052	< 0.042	< 0.22	< 0.023	< 0.022	< 0.041	< 0.44	< 0.022	< 0.33	< 0.056				
	Acenaphthene	8270C	52	mg/kg dry	< 0.23	1.6	< 0.21	< 0.24	< 0.0023	< 0.0052	0.00082 J	< 0.0055	< 0.0052	< 0.0042	< 0.022	< 0.0023	< 0.0022	< 0.041	< 0.044	< 0.022	1.2	0.029				
	Acenaphthylene	8270C	78	mg/kg dry	< 0.23	< 0.27	< 0.21	< 0.24	0.00072 J	< 0.0052	< 0.0044	< 0.0055	< 0.0052	0.0025 J	< 0.022	< 0.0023	< 0.0022	< 0.041	< 0.044	< 0.022	< 0.033	< 0.0056				
	Anthracene	8270C	1040	mg/kg dry	< 0.23	< 0.27	< 0.21	< 0.24	0.00084 J	< 0.0052	0.0016 J	< 0.0055	< 0.0052	0.0031 J	0.0052 J	< 0.023	< 0.022	< 0.041	< 0.044	< 0.022	< 0.033	0.0088				
	Benz[a]anthracene	8270C	0.15	mg/kg dry	0.1 J	0.36	0.062	< 0.3	0.0057	0.001 J	0.0073	0.049	< 0.0065	0.0055	0.01 J	0.00068 J	< 0.0027	< 0.0051	< 0.055	< 0.028	0.026 J	0.051				
	Benz[a]pyrene	8270C	0.015	mg/kg dry	< 0.34	0.59	0.057	0.072 J	0.0047	0.00086 J	0.0065 J	0.037	< 0.0078	0.0071	0.01 J	0.0013 J	0.0008 J	< 0.0061	< 0.066	0.0016 J	< 0.049	0.041				
	Benz[b]fluoranthene	8270C	0.15	mg/kg dry	< 0.23	< 0.27	< 0.21	< 0.24	0.0057	< 0.0052	0.0099	0.054	< 0.0052	0.0099	0.0076 J	0.00082 J	0.00091 J	< 0.0041	< 0.044	< 0.0098 J	< 0.033	0.049				
	Benz[g,h,i]perylene	8270C	1178	mg/kg dry	0.18 J	< 0.34	< 0.27	< 0.3	0.002 J	< 0.0065	0.0066	0.021	< 0.0065	0.016	0.006 J	< 0.0028	0.00086 J	< 0.0051	< 0.055	0.0011 J	< 0.041	0.024				
	Benz[k]fluoranthene	8270C	1.5	mg/kg dry	< 0.28	< 0.34	< 0.27	< 0.3	0.0018 J	< 0.0065	0.0028 J	0.011	< 0.0065	0.0023 J	0.0058 J	0.00019 J	0.00016 J	< 0.0051	< 0.055	0.00038 J	< 0.041	0.012				
	bis(2-ethylhexyl) phthalate	8270C	11.8	mg/kg dry	< 17	< 20	< 16	< 18	< 0.17	< 0.39	0.12 J	0.3 J	< 0.39	0.15 J	< 2.7	< 0.28	< 0.27	< 0.51	< 5.5	< 0.28	< 4.1	< 0.70				
	Butyl benzyl phthalate	8270C	260	mg/kg dry	< 1.1	< 1.4	< 1.1	< 1.2	< 0.012	< 0.026	0.014 J	< 0.027	< 0.026	< 0.31	< 1.6	< 0.17	< 0.16	< 0.31	< 3.3	< 0.17	< 2.5	< 0.42				
	Benzoic Acid	8270C	77	mg/kg dry	< 28	< 34	< 27	< 30	< 0.29	< 0.32	< 0.55	< 0.68	< 0.65	< 0.21	< 0.11	< 0.11	< 0.20	< 0.22	< 0.11	< 0.16	< 0.028					
	Carbazole	8270C	NSA	mg/kg dry	< 1.7	2.0 UJ	< 1.6	< 1.8	< 0.017	< 0.039	0.0015 J	< 0.041	< 0.039	0.0018 J	< 0.16	0.017 UJ	0.016 UJ	0.031 UJ	< 0.33	0.017 UJ	< 0.25	0.042 UJ				
	Chrysene	8270C	15	mg/kg dry	0.11 J	1.9	0.34	< 0.3	0.0068	0.0017 J	0.01	0.1	0.012	0.0081	0.014 J	0.00045 J	< 0.0027	< 0.0051	< 0.055	< 0.028	0.047	0.069				
	Dibenz(a,h)anthracene	8270C	0.015	mg/kg dry	< 0.45	< 0.54	< 0.43	< 0.49	< 0.0046	< 0.01	0.0014 J	0.0081 J	< 0.010	< 0.0084	< 0.044	< 0.0045	< 0.0043	< 0.0082	< 0.088	< 0.045	< 0.065	0.0079 J				
	Dibenzofuran	8270C	6.1	mg/kg dry	< 1.1	0.56 J	< 1.1	< 1.2	< 0.012	< 0.026	0.00085 J	< 0.027	< 0.026	< 0.021	< 0.11	< 0.11	< 0.011	< 0.020	< 0.22	< 0.011	< 0.16	< 0.028				
	Diethyl phthalate	8270C	27.5	mg/kg dry	0.2 J	< 1.4	< 1.1	< 1.2	0.0019 J	0.002 J	0.0036 U	< 0.027	0.0069 U	0.0036 U	0.019 J	0.011 U	0.011 U	< 0.020	< 0.22	0.011 U	< 0.16	< 0.028				
	Di-n-butyl phthalate	8270C	31	mg/kg dry	< 2.3	< 2.7	< 2.1	< 2.4	0.0071 U	0.0067 U	0.008	< 0.055	0.0091 U	0.01 U	< 0.22	0.023 U	0.022 U	0.2 J	< 0.44	0.022 U	0.33 U	< 0.056				
	Di-n-octyl phthalate	8270C	1829	mg/kg dry	< 2.3	2.7 U	< 2.1	< 2.4	< 0.023	< 0.052	< 0.044	< 0.055	< 0.052	< 0.042	< 0.22	< 0.023	< 0.022	< 0.041	< 0.44	< 0.022	< 0.33	< 0.056				
	Fluoranthene	8270C	364	mg/kg dry	< 0.23	1.0	0.13	0.089 J	0.0078	0.001 J	0.015	0.077	0.0021 J	0.0082	0.017 J	< 0.0023	< 0.0022	< 0.041	< 0.044	< 0.022	0.15	0.04				
	Fluorene	8270C	54.8	mg/kg dry	< 0.23	4.5	0.38	< 0.24	< 0.0023	< 0.0052	0.0014 J	0.012	&													

TABLE 1

Test Pit Soil Results

Type	Analytes	Method										
TPH	Diesel Range Organics	NWTPH-Dx	NSA	mg/kg dry	< 15.8	23.4	< 16.9	763	2120	1790		
	Heavy Oils	NWTPH-Dx	NSA	mg/kg dry	42.2	182	< 42.3	263	1090	2050		
PCBs	Aroclor 1016	8082	3.9	mg/kg dry	< 0.0097	< 0.0096	< 0.0099	< 0.0098	< 0.0097	< 0.0098		
	Aroclor 1221	8082	0.17	mg/kg dry	< 0.0097	< 0.0096	< 0.0099	< 0.0098	< 0.0097	< 0.0098		
	Aroclor 1232	8082	0.17	mg/kg dry	< 0.0097	< 0.0096	< 0.0099	< 0.0098	< 0.0097	< 0.0098		
	Aroclor 1242	8082	0.22	mg/kg dry	< 0.0097	< 0.0096	< 0.0099	< 0.0098	< 0.0097	< 0.0098		
	Aroclor 1248	8082	0.22	mg/kg dry	< 0.0097	< 0.0096	< 0.0099	< 0.0098	< 0.0097	< 0.0098		
	Aroclor 1254	8082	0.22	mg/kg dry	< 0.0097	< 0.0096	< 0.0099	< 0.0098	< 0.0097	< 0.0098		
	Aroclor 1260	8082	0.22	mg/kg dry	< 0.0097	< 0.0096	< 0.0099	0.0128	< 0.0097	0.0265		
Carcinogenic PAH	Benz(a)anthracene	8270C	0.15	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.0202	0.144	0.0258		
	Benz(a)pyrene	8270C	0.02	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.00777	< 0.0538	< 0.0155		
	Benz(b)fluoranthene	8270C	0.15	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.0155	0.108	0.0330		
	Benz(k)fluoranthene	8270C	1.5	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	< 0.00466	< 0.0538	< 0.0155		
	Chrysene	8270C	15	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.0394	0.236	0.0733		
	Dibenz(a,h)anthracene	8270C	0.02	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.00829	< 0.0538	0.0165		
	Indeno(1,2,3-cd)pyrene	8270C	0.15	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.00725	< 0.0538	0.0155		
Non-Carcinogenic PAH	Acenaphthene	SIM 8270C	52.3	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.270	0.959	0.111 J		
	Acenaphthylene	SIM 8270C	78	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	< 0.00466	< 0.0538	0.0186 J		
	Anthracene	SIM 8270C	1040	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.206	1.24	0.167 J		
	Benzo(g,h,i)perylene	SIM 8270C	1178	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.0104	< 0.0538	0.0217		
	Fluoranthene	SIM 8270C	364	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.0233	0.379	0.0557 J		
	Fluorene	SIM 8270C	54.8	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.374	1.39	0.184 J		
	Naphthalene	SIM 8270C	1.14	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.114	1.89	0.109		
	Phenanthrone	SIM 8270C	79	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.664	4.21	0.277 J		
	Pyrene	SIM 8270C	359	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	0.110	1.05	0.275		
	1-Methylnaphthalene	SIM 8270C	22	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	1.56	10.5	0.759		
	2-Methylnaphthalene	SIM 8270C	310	mg/kg dry	< 0.00492	< 0.00489	< 0.00451	1.52	14.2	0.459		
Total Metals	Aluminum	6010 / 6020	77000	mg/kg dry	6800	5500	6200	9000	9200	6500		
	Arsenic	6010 / 6020	0.4	mg/kg dry	17	6.8	7.8	9	7.8	15		
	Antimony	6010 / 6020	4.8	mg/kg dry	0.97	0.36	0.49	0.8	1.4	1.2		
	Barium	6010 / 6020	896	mg/kg dry	47	34	42	90	90	40		
	Beryllium	6010 / 6020	1.63	mg/kg dry	0.36	0.21	0.27	0.35	0.38	0.29		
	Calcium	6010 / 6020	NSA	mg/kg dry	25000	2000	1300	1500	1300	1100		
	Cadmium	6010 / 6020	1.35	mg/kg dry	0.13 J	0.17 J	0.11 J	0.16 J	0.14 J	0.13 J		
	Chromium	6010 / 6020	2135	mg/kg dry	6.2	7.3	7.6	9.9	9.8	7.4		
	Cobalt	6010 / 6020	23	mg/kg dry	11	6.1	7	8	7.8	7.9		
	Copper	6010 / 6020	921	mg/kg dry	23	20	21	25	45	23		
	Iron	6010 / 6020	5.8	mg/kg dry	16000	11000	12000	13000	12000	12000		
	Lead	6010 / 6020	49.6	mg/kg dry	9.3	7.4	7.3	12	19	15		
	Magnesium	6010 / 6020	NSA	mg/kg dry	6300	3100	3500	5000	4500	3900		
	Manganese	6010 / 6020	223	mg/kg dry	520	270	200	170	160	170		
	Mercury	7470A / 7471B	0.0051	mg/kg dry	0.013 J	0.017 J	0.015 J	< 0.023	< 0.020	0.016 J		
	Nickel	6010 / 6020	59.1	mg/kg dry	17	9.3	9.9	13	13	12		
	Potassium	6010 / 6020	NSA	mg/kg dry	1200	1200	1400	1700	1200	1200		
	Selenium	6010 / 6020	2	mg/kg dry	0.068 J	0.055 J	0.073 J	0.16 J	0.14 J	0.13 J		
	Silver	6010 / 6020	0.19	mg/kg dry	< 1.0	< 1.0	< 1.1	< 1.2	< 1.0	< 1.0		
	Sodium	6010 / 6020	NSA	mg/kg dry	100 UJ	100 UJ	110 UJ	120 UJ	100 UJ	100 UJ		
	Thallium	6010 / 6020	1.55	mg/kg dry	0.41 U	0.40 U	0.42 U	0.46 U	0.42 U	0.41 J		
	Vanadium	6010 / 6020	2.4	mg/kg dry	10	12	16	23	21	17		
	Zinc	6010 / 6020	886	mg/kg dry	26	28	29	36	30	23		

Notes: Bold - Detection is above media Screening Levels

NSA - No screening level available.

< " - The analyte is not detected above the reporting quantitation limit.

U - Analyte not detected above the reported amount as a result of validation rules.

J - The analyte is positively identified. However, the result is an estimated value.

UJ - The analyte was not detected above the reporting quantitation limit. However the reporting limit is approximate.

R - The data is rejected due to a deficiency in quality control criteria.

Type	Analytes	Method										
Semivolatiles	1-Methylnaphthalene	8270C	22	mg/kg dry	< 0.0032	0.00056 J	0.00031 J	5.5	10	0.78		
	2-Methylnaphthalene	8270C	310	mg/kg dry	< 0.0021	0.00067 J	0.00046 J	4.6	9.5	0.38		
	2-Methylphenol	8270C	1.8	mg/kg dry	< 0.011	< 0.011	< 0.011	< 0.24	< 0.22	< 1.1		
	3 & 4 Methylphenol	8270C	NSA	mg/kg dry	< 0.021	< 0.022	< 0.022	< 0.47	< 0.44	< 2.2		
	Acenaphthene	8270C	52	mg/kg dry	< 0.0021	< 0.0022	< 0.0022</					

TABLE 2

Monitoring Well and Boring Soil Sample Results

Type	Analytes	Method	Level mg/Kg	Collection Date																					
					8/28/2009	8/28/2009	8/28/2009	8/28/2009	8/28/2009	8/28/2009	8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/27/2009	8/26/2009	8/26/2009	
				Units																					
TPH	Diesel Range Organics	NWTPH-Dx	NSA	mg/kg dry	37.8	< 113	262	< 11	< 11.5	20.7	< 21.2	12.2	601	< 21.4	2380	19.2	30.1	1060	109	37.1 J	22.9 J				
	Heavy Oils	NWTPH-Dx	NSA	mg/kg dry	349	201	96.4	60.1	< 28.8	50.7	91.1	37.5	345	68.6	1360	< 31.3	201	703	170	73.0 J	70.7 J				
PCBs	Aroclor 1016	8082	3.9	mg/kg dry	< 0.0099	< 0.010	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0098	< 0.0098	< 0.0099	< 0.0099	< 0.010	< 0.0095	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0096				
	Aroclor 1221	8082	0.17	mg/kg dry	< 0.0099	< 0.010	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0098	< 0.0098	< 0.0099	< 0.0099	< 0.010	< 0.0095	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0096				
	Aroclor 1232	8082	0.17	mg/kg dry	< 0.0099	< 0.010	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0098	< 0.0098	< 0.0099	< 0.0099	< 0.010	< 0.0095	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0096				
	Aroclor 1242	8082	0.22	mg/kg dry	< 0.0099	< 0.010	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0098	< 0.0098	< 0.0099	< 0.0099	< 0.010	< 0.0095	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0096				
	Aroclor 1248	8082	0.22	mg/kg dry	< 0.0099	< 0.010	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0098	< 0.0098	< 0.0099	< 0.0099	< 0.010	< 0.0095	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0096				
	Aroclor 1254	8082	0.22	mg/kg dry	< 0.0099	< 0.010	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0098	< 0.0098	< 0.0099	< 0.0099	< 0.010	< 0.0095	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0096				
	Aroclor 1260	8082	0.22	mg/kg dry	< 0.0099	< 0.010	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0098	< 0.0098	< 0.0099	< 0.0099	< 0.010	< 0.0095	< 0.0099	< 0.010	< 0.0097	< 0.0099	< 0.0096				
Carcinogenic PAH	Benzo(a)anthracene	8270C	0.15	mg/kg dry	< 0.0048	< 0.00452	< 0.00487	0.0059	0.00461	0.0426	< 0.00848	< 0.00485	0.0306	0.0114	0.0778	< 0.00459	< 0.00999	0.0413	0.00595 J	0.00449 UJ	0.00457 UJ				
	Benzo(a)pyrene	8270C	0.02	mg/kg dry	< 0.0048	< 0.00452	< 0.00487	0.0073	0.00512	0.0146	< 0.00848	0.00497	0.0139	0.0129	0.0413	< 0.00459	0.0133	0.0171	< 0.00487	0.00449 UJ	0.00457 UJ				
	Benzo(b)fluoranthene	8270C	0.15	mg/kg dry	< 0.0048	< 0.00452	< 0.00487	0.0102	0.0138	< 0.0109	< 0.00848	0.00646	< 0.00519	0.0324	0.0471	< 0.00459	0.0257	< 0.0106	< 0.00487	0.00449 UJ	0.00457 UJ				
	Benzo(k)fluoranthene	8270C	1.5	mg/kg dry	< 0.0048	< 0.00452	< 0.00487	< 0.00476	< 0.00461	< 0.0109	< 0.00848	< 0.00485	0.0208	< 0.00429	< 0.00865	< 0.00459	< 0.00999	< 0.0106	< 0.00487	0.00449 UJ	0.00457 UJ				
	Chrysene	8270C	15	mg/kg dry	< 0.0048	< 0.00452	< 0.00487	0.0063	0.0102	0.0839	< 0.00848	0.00895	0.0491	0.0100	0.1960	< 0.00459	0.0114	0.0816	0.0146 J	0.00449 UJ	0.00457 UJ				
	Dibenz(a,h)anthracene	8270C	0.02	mg/kg dry	< 0.0048	< 0.00452	< 0.00487	0.0093	< 0.00461	< 0.0109	< 0.00848	0.0081	0.0048	< 0.00865	< 0.00459	< 0.00999	< 0.0106	< 0.00487	0.00449 UJ	0.00457 UJ					
	Indeno(1,2,3-cd)pyrene	8270C	0.15	mg/kg dry	< 0.0048	< 0.00452	< 0.00487	0.0083	< 0.00461	0.0109	< 0.00848	< 0.00485	0.0075	0.0067	0.0087	< 0.00459	0.0124	< 0.0106	< 0.00487	0.00449 UJ	0.00457 UJ				
Non-Carcinogenic PAH	Acenaphthene	SIM 8270C	52.3	mg/kg dry	< 0.0048	< 0.00452	0.00584	< 0.00476	< 0.00461	0.3680	< 0.00848	< 0.00485	0.0381	< 0.00429	0.1680	< 0.00459	< 0.00999	0.347 J	0.0271 J	0.00449 UJ	0.00457 UJ				
	Acenaphthylene	SIM 8270C	78	mg/kg dry	< 0.0048	< 0.00452	< 0.00487	< 0.00476	< 0.00461	< 0.0109	< 0.00848	< 0.00485	< 0.00519	< 0.00429	< 0.00865	< 0.00459	< 0.00999	0.0106 UJ	< 0.00487	0.00449 UJ	0.00457 UJ				
	Anthracene	SIM 8270C	1040	mg/kg dry	< 0.0048	< 0.00452	< 0.00487	< 0.00476	< 0.00461	< 0.0109	< 0.00848	< 0.00485	0.1080	< 0.00429	0.6150	< 0.00459	< 0.00999	0.315 J	0.0173 J	0.00499 J	0.00457 UJ				
	Benzo(g,h,i)perylene	SIM 8270C	1178	mg/kg dry	< 0.0048	< 0.00452	< 0.00487	0.0107	0.00563	0.0243	0.0160	0.00597	0.0098	0.0091	0.0211	< 0.00459	0.0200	0.0151	0.00487 J	0.00449 UJ	0.00457 UJ				
	Fluoranthene	SIM 8270C	364	mg/kg dry	< 0.0048	< 0.00452	< 0.00487	< 0.00476	0.00922	0.0511	< 0.00848	0.0094	0.0294	0.0076	0.1530	< 0.00459	< 0.00999	0.0826	0.0146 J	0.00449 UJ	0.00457 UJ				
	Fluorene	SIM 8270C	54.8	mg/kg dry	< 0.0048	< 0.00452	< 0.00487																		

TABLE 3a

Groundwater Level Measurements - September 2009

ID	Time	Date	Water Level (Feet BTOC)	TOC Elevation (Feet AMSL)	Water Elevation (Feet AMSL)	LNAPL Level (Feet BTOC)	LNAPL Thickness (Feet)	LNAPL Corrected Water Level	Odor/Sheen
<i>Monitoring Wells</i>									
GA-1	10:04	9/1/2009	13.6	2478.19	2464.59	13.59	0.01	2464.60	Probe coated in oil like product.
GA-2	9:35	9/1/2009	8.62	2472.74	2464.12	---	---	---	
GA-3	9:45	9/1/2009	15.92	2479.23	2463.31	---	---	---	
GA-4	9:24	9/1/2009	9.81	2474.21	2464.40	---	---	---	
EMW-01	12:43	9/1/2009	10.2	2478.00	2467.80	---	---	---	
EMW-02	15:01	9/1/2009	10.81	2477.82	2467.01	---	---	---	Slight odor.
EMW-03	10:31	9/1/2009	13.32	2478.10	2464.78	---	---	---	
EMW-04	10:46	9/1/2009	13.63	2478.33	2464.70	---	Thin Layer	---	Probe coated in oil like product.
EMW-05	11:02	9/1/2009	14.68	2480.24	2465.56	---	---	---	
EMW-06	12:09	9/1/2009	13.89	2479.36	2465.47	13.65	0.24	2465.69	Probe coated in oil and diesel like product.
EW-3	13:39	9/1/2009	12.18	2478.00	2465.82	---	---	---	
EW-4	13:46	9/1/2009	12.85	2479.43	2466.58	---	---	---	Sheen on water.
MW-5	12:54	9/1/2009	10.99	2478.06	2467.07	---	---	---	
MW-11	11:45	9/1/2009	N/A	2484.28	---	17.3	---	---	Probe coated in oil like product.
HC-4	---	---	NS	NS	---	---	---	---	
HC-1R	14:38	9/1/2009	13.23	2477.81	2464.58	---	---	---	
DW-01	9:54	9/1/2009	11.54	2475.91	2464.37	---	---	---	
EW-?	16:33	9/4/2009	18.05	2483.43	2465.38	---	---	---	
<i>Stick-up Pipes</i>									
#1002	10:10	9/9/2009	Dry	2482.21	---	---	---	---	
#1005	10:07	9/9/2009	16.55	2483.13	2466.58	---	---	---	
#1006	10:00	9/9/2009	18.1	2484.63	2466.53	---	---	---	Probe smells like petroleum.
#1007	9:56	9/9/2009	14.7	2481.56	2466.86	---	---	---	
#1010	16:46	9/4/2009	Dry	2481.82	---	15.34	Thin Layer	---	Oil like product at bottom of well.
#1012	14:00	9/1/2009	Dry	2483.01	---	---	---	---	
#1014	16:41	9/4/2009	19.55	2485.18	2465.63	---	---	---	
#1015	16:43	9/4/2009	Dry	2485.23	---	---	---	---	
#1023	16:25	9/4/2009	Dry	2483.89	---	---	---	---	
#1024	16:23	9/4/2009	Dry	2482.98	---	---	---	---	
#1025	16:19	9/4/2009	18.29	2483.31	2465.02	---	---	---	
#1030	16:16	9/4/2009	Dry	2482.69	---	---	---	---	
#1031	16:12	9/4/2009	17.43	2482.63	2465.20	---	---	---	
Black Pipe	16:30	9/4/2009	N/A	2483.58	---	---	---	---	
Piezometer	15:49	9/1/2009	Dry	2484.16	---	---	---	---	

Notes: Dry - At the time of measurement, the well did not contain any water.

N/A - Water level not measured in this well due to extenuating circumstances.

NS - could not be located in September 2009 so it was not included in the geodetic survey.

* Could not determine LNAPL thickness due to presence of drop tube in well.

LNAPL Corrected Water Level Calculation = Water Level + (LNAPL thickness x 0.90 specific gravity of LNAPL)

Bold - Surveyor indicated TOC elevation for EMW-06 required +3.73 foot correction.

TABLE 3b

Groundwater Level Measurements - November 2009

ID	Time	Date	Water Level (Feet BTOC)	TOC Elevation (Feet AMSL)	Water Elevation (Feet AMSL)	LNAPL Level (Feet BTOC)	LNAPL Thickness (Feet)	LNAPL Corrected Water Level	Odor/Sheen
Monitoring Wells									
GA-1	13:00	11/19/2009	13.72	2478.19	2464.47	---	---		
GA-2	7:45	11/19/2009	8.77	2472.74	2463.97	---	---		
GA-3	8:00	11/19/2009	16.07	2479.23	2463.16	---	---		
GA-4	7:32	11/19/2009	9.94	2474.21	2464.27	---	---		
EMW-01	8:15	11/19/2009	10.31	2478.00	2467.69	---	---		
EMW-02	11:45	11/19/2009	10.84	2477.82	2466.98	---	---		
EMW-03	11:40	11/19/2009	13.43	2478.10	2464.67	---	---		
EMW-04	12:00	11/19/2009	13.66	2478.33	2464.67	*	---		
EMW-05	13:05	11/19/2009	14.81	2480.24	2465.43	---	---		
EMW-06	12:40	11/19/2009	13.63	2479.36	2465.73	*	---		
EW-3	15:40	11/19/2009	12.13	2478.00	2465.87	---	---		
EW-4	14:42	11/19/2009	12.81	2479.43	2466.62	---	---		
MW-5	12:35	11/19/2009	11.70	2478.06	2466.36	---	---		
MW-11	9:20	11/19/2009	---	2484.28	---	---	3.73 (ft from bottom of well)		
HC-4	8:30	11/19/2009	14.44	NS	---	13.20	1.24		
HC-1R	15:20	11/19/2009	13.35	2477.81	2464.46	---	---		
DW-01	10:50	11/19/2009	11.62	2475.91	2464.29	---	---		
Stick-up Pipes									
#1007	15:35	11/19/2009	14.68	2481.56	2466.88	---	---	Slight petroleum-like odor noted.	
#1010	11:25	11/19/2009	---	2481.82	---	15.95	---	Could not determine depth to water due to presence of viscous oil.	
Piezometer	15:50	11/19/2009	dry	2484.16	---	---	---		

Notes: * Could not determine LNAPL thickness due to presence of drop tube in well.

NS - could not be located in September 2009 so it was not included in the geodetic survey.

LNAPL Corrected Water Level Calculation = Water Level + (LNAPL thickness x specific gravity of LNAPL)

Bold - Surveyor indicated TOC elevation for EMW-06 required +3.73 foot correction.

TABLE 4

Groundwater Results

Type	Analytes	Method	Sample Points (1-18)																					
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18				
TPH	Diesel Range Organics	NWTPH-Dx	NSA	ug/L	<243	<243	--	<243	--	<243	--	484	992	1850	--	<236	<236	--	352 J	--	611	--	546	--
	Heavy Oils	NWTPH-Dx	NSA	ug/L	<485	<485	--	<485	--	<485	--	713	637	1600	--	<472	<472	--	472 UJ	--	<472	--	<481	--
	Aroclor 1016	8082	0.5	ug/L	<0.047	<0.047	--	N/A	--	<0.047	--	N/A	N/A	N/A	--	N/A	N/A	--	0.047 UJ	--	N/A	--	N/A	--
	Aroclor 1221	8082	0.0068	ug/L	0.047 UJ	0.047 UJ	--	N/A	--	0.047 UJ	--	N/A	N/A	N/A	--	N/A	N/A	--	0.047 UJ	--	N/A	--	N/A	--
	Aroclor 1232	8082	0.0068	ug/L	0.047 UJ	0.047 UJ	--	N/A	--	0.047 UJ	--	N/A	N/A	N/A	--	N/A	N/A	--	0.047 UJ	--	N/A	--	N/A	--
	Aroclor 1242	8082	0.028	ug/L	0.047 UJ	0.047 UJ	--	N/A	--	0.047 UJ	--	N/A	N/A	N/A	--	N/A	N/A	--	0.047 UJ	--	N/A	--	N/A	--
	Aroclor 1248	8082	0.028	ug/L	0.047 UJ	0.047 UJ	--	N/A	--	0.047 UJ	--	N/A	N/A	N/A	--	N/A	N/A	--	0.047 UJ	--	N/A	--	N/A	--
	Aroclor 1254	8082	0.034	ug/L	0.047 UJ	0.047 UJ	--	N/A	--	0.047 UJ	--	N/A	N/A	N/A	--	N/A	N/A	--	0.047 UJ	--	N/A	--	N/A	--
	Aroclor 1260	8082	0.028	ug/L	<0.047	<0.047	--	N/A	--	<0.047	--	N/A	N/A	N/A	--	N/A	N/A	--	0.047 UJ	--	N/A	--	N/A	--
	PCBs																							
Carcinogenic PAH	Benzo(a)anthracene	8270C	0.029	ug/L	<0.0094	<0.0094	--	<0.0094	--	<0.0094	--	0.0081 J	<0.0094	<0.0094	--	<0.0094	<0.0094	--	0.0024 J	--	<0.0096	--	0.0040 J	--
	Benzo(a)pyrene	8270C	0.0029	ug/L	<0.019	<0.019	--	<0.019	--	<0.019	--	<0.019	<0.019	<0.019	--	<0.019	<0.019	--	<0.019	--	<0.019	--	<0.019	--
	Benzo(b)fluoranthene	8270C	0.029	ug/L	<0.0094	<0.0094	--	<0.0094	--	<0.0094	--	<0.0095	<0.0094	<0.0094	--	<0.0094	<0.0094	--	<0.0094	--	<0.0096	--	<0.0094	--
	Benzo(k)fluoranthene	8270C	0.29	ug/L	<0.0094	<0.0094	--	<0.0094	--	<0.0094	--	<0.0095	<0.0094	<0.0094	--	<0.0094	<0.0094	--	<0.0094	--	<0.0096	--	<0.0094	--
	Chrysene	8270C	2.9	ug/L	<0.0094	<0.0094	--	<0.0094	--	<0.0094	--	0.011	<0.0094	0.023 J	--	<0.0094	0.0052 J	--	0.0065 J	--	0.024 J	--	0.068 J	--
	Dibenz(a,h)anthracene	8270C	0.0029	ug/L	<0.0094	<0.0094	--	<0.0094	--	<0.0094	--	<0.0095	<0.0094	<0.0094	--	<0.0094	<0.0094	--	<0.0094	--	<0.0096	--	<0.0094	--
	Indeno[1,2,3-cd]pyrene	8270C	0.029	ug/L	<0.0094	<0.0094	--	<0.0094	--	<0.0094	--	<0.0095	<0.0094	<0.0094	--	<0.0094	<0.0094	--	<0.0094	--	<0.0096	--	<0.0094	--
	Non-Carcinogenic PAH																							
	Acenaphthene	SIM 8270C	626	ug/L	0.0029 J	<0.0094	--	0.0011 J	--	0.025	--	0.5	0.21	0.040	--	0.0094 U	0.049	--	0.20	--	1.0	--	1.6	--
	Acenaphthylene	SIM 8270C	626	ug/L	<0.0094	0.0016 J	--	<0.0094	--	0.0050 J	--	0.081	0.027	0.0055 J	--	<0.0094	0.0073 J	--	0.042	--	0.13	--	0.25	--
Total Metals	Anthracene	SIM 8270C	3,129	ug/L	0.0021 J	0.00083 J	--	0.0016 J	--	<0.0094	--	0.088	0.036	0.0096	--	0.0094 U	0.017	--	0.033	--	0.19	--	0.26	--
	Benz(a,g,i)perylene	SIM 8270C	313	ug/L	<0.0094	<0.0094	--	<0.0094	--	<0.0094	--	0.0021 J	<0.0094	<0.0094	--	<0.0094	<0.0094	--	<0.0094	--	<0.0096	--	<0.0094	--
	Fluoranthene	SIM 8270C	417	ug/L	0.0032 J	<0.0094	--	<0.0094	--	0.0087 J	--	0.023	0.0094 U	0.014	--	0.0094 U	0.0094 U	--	0.018	--	0.048	--	0.060	--
	Fluorene	SIM 8270C	417	ug/L	0.0034 J	0.0020 J	--	0.0012 J	--	0.019	--	0.47	0.12	0.054	--	0.0094 U	0.078	--	0.47	--	1.3	--	2.3	--
	Naphthalene	SIM 8270C	0.14	ug/L	0.0062 J	0.0074 J	--	<0.0094	--	0.040	--	0.22	0.078	0.017	--	0.0094 U	0.042	--	0.039	--	2.4	--	5.8	--
	Phenanthrene	SIM 8270C	150	ug/L	0.0094 U	0.0094 U	--	0.0094 U	--	0.020	--	0.14	0.0099	0.036	--	0.0094 U	0.014	--	0.040	--	1.3	--	2.0	--
	Pyrene	SIM 8270C	313	ug/L	0.0094 U	0.0094 U	--	<0.0094	--	0.0097 U	--	0.064	0.014	0.033	--	0.0094 U	0.015	--	0.019	--	0.055	--	0.074	--
	1-Methylnaphthalene	SIM 8270C	0.14	ug/L	0.0094 U	0.0094 U	--	0.0094 U	--	0.021	--	1.1	0.069	0.045	--	0.0094 U	0.034	--	0.077	--	9.7	--	14	--
	2-Methylnaphthalene	SIM 8270C	313	ug/L	0.0037	0.0048 J	--	<0.012	--	0.020	--	0.094	0.012	0.012 U	--	<0.012	0.066	--	<0.012	--	1.6	--	6.7	--
	Aluminum	6010 / 6020	200	ug/L	400 U	71 J	--	400 U	--	3700	<500	<500	12	<500	<500	--	14	<500	--	<500	--	12	<500	20
Total Metals	Arsenic	6010 / 6020	0.045	ug/L	<2.0	<2.0	--	<2.0	--	0.91 J	--	10	<2.0	37	<2.0	<2.0	15	17	6.3	9.6	52	63	23	28
	Antimony	6010 / 6020	6	ug/L	<2.0	2.8	--	1.8 J	--	1.5 J	--	1.5 J	1.4 J	0.95 J	0.9	0.74 J	0.62 J	2.2	0.78 J	--	<2.0	1.9	<2.0	1.8
	Barium	6010 / 6020	2000	ug/L	77	25	--	19	--	38	--	55	8.1	97	25	23	62	61	94	--	57	59	45	44
	Beryllium	6010 / 6020	4	ug/L	<2.0	<2.0	--	<2.0	--	<2.0	--	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
	Calcium	6010 / 6020	NSA	ug/L	27000	34000	--	38000	--	21000	--	24000	12000	61000	29000	69000	69000	70000	34000	35000	36000	34000	34000	
	Cadmum	6010 / 6020	5	ug/L	<2.0	<2.0	--	<2.0	--	<2.0	--	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
	Chromium	6010 / 6020	100	ug/L	0.71 J	0.62 J	--	<2.0	--	0.38 J	--	4.3	0.52 J	<2.0	0.6	<2.0	0.7	<2.0	0.8	<2.0	1	<2.0	0.8	
	Cobalt	6010 / 6020	11	ug/L	0.7 J	1.3 J	--	<2.0	--	0.38 J	--	3.2	<2.0	1.1 J	0.82	0.45 J	0.6 J	1.7	1.2 J	0.42 J	1.4	<2.0	1.3	
	Copper	6010 / 6020	1000	ug/L	2.6 J	3.7 J	--	2 J	--	1.6 J	--	18	0.82 J	0.83 J	0.68	0.84 J	0.81 J	0.4	1.3 J	0.77 J	0.22	0.64 J	0.21	
	Iron	6010 / 6020	300	ug/L	65 J	<200	--	8800	1100	53 J	--	10000	200	38000	5100	2300	2000	19000	7800	8000	19000	19000	12000	11000
Trace Elements	Lead	6010 / 6020	15	ug/L	0.18 J	<2.0	--	0.3 J	--	<2.0	--	12	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
	Magnesium	6010 / 6020	NSA	ug/L	6600	9900	--	11000	--	3300	--	8000	2500	8700	6400	8000	11000	11000	11000	11000	6900	6800	7800	7500
	Manganese	6010 / 6020	50	ug/L	250	180	180	220	--	440	470	1400	8.5 J	3800	210	180	1400	1300	2000	--	2200	2300	1000	980
	Mercury	7470 A / 7471 B	1	ug/L	<0.02	<0.02	<0.02	<0.02	--	<0.02	--	0.073 J	<0.2	<0.2	<0.2	<0.2	0.12 J	0.074 J	<0.20	<0.2	0.079 J	<0.20	0.12 J	<0.20
	Nickel	6010 / 6020	209	ug/L	2.4	2.7	--	1.4 J	--	2.4	--	5.7	0.44 J	1.4 J	0.9	1.2 J	1.3 J	1.3	2.0 J	--	0.85 J	0.44	0.73 J	0.42
	Potassium	6010 / 6020	NSA	ug/L	2300 J	3200 J	--	1300 J	--	2400 J	--	1600 J	740 J	2900 J	1100	900 J	3200	3400	1500 J	1600	1400 J	1400	1400	1400
	Selenium	6010 / 6020	50	ug/L	<2.0	<2.0	--	1 J	--	<2.0	--	<2.0	<2.0	<2.0	0.5	<2.0	<2.0	0.9	<2.0	<2.0	0.5	<2.0	<2.0	
	Silver	6010 / 6020	52	ug/L	<2.0	<2.0	--	<2.0	--	<2.0	--	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
	Sodium	6010 / 6020	NSA	ug/L	2800 J+	2800 J+	--	2400 J+	--	2000 U	--	2700 J+	1100 J	2400	2200	2500	3300	3200	3500	2400	2300	2600	2600	2600
	Thallium	6010 / 6020	2	ug/L	<4.0	4 U	--	4 U	--	<4.0	--	4.0 U	<4.0	<4.0	0.5	<4.0	<4.0	1.4	<4.0	<4.0	1.1	<4.0	0.92	
Trace Elements	Vanadium	6010 / 6020	180	ug/L	<2.0	<2.0	--	<2.0	--	0.75 J	--	5.7	<2.0	<2.0	1.6	<2.0	<2.0	2.0	<2.0	<2.0	3.1	<2.0	3.1	
	Zinc	6010 / 6020	3129	ug/L	2.7 J	3.1 J	--	240	84	2.5 J	--	28	<7.0	<7.0	32000	1200	<7.0	27.0	<7.0	4.0	<7.0	5.6		

Notes:

Shading indicates dissolved metals analysis.

Bold - Detection is above media Screening Levels

NSA - No screening level available.

N/A - This sample was not analyzed for this constituent.

"<" - The analyte is not detected above the reporting quantitation limit.

U - Analyte not detected above the reported amount as a result of validation

J - The analyte is positively identified. However, the result is an estimated value.

UJ - The analyte was not detected above the reporting quantitation limit. However the result is an estimated value.

R - The data is rejected due to a deficiency in quality control criteria.

R - The data is rejected due to a deficiency in quality control criteria.

TABLE 5

LNAPL Results

	Analytes	Method	Screening Level mg/kg	Sample ID Collection Date units	G-MW11FP-090109	G-P1010FP-090409	G-HC4FP-111909	G-RS5FP-090509	G-RS4FP-090509	G-RS3FP-090509	G-RS3aFP-090509
					9/1/2009	9/4/2009	11/19/2009	9/5/2009	9/5/2009	9/5/2009	9/5/2009
TPH (mg/kg)	Diesel Range Organics	NWTPH-Dx	NSA	mg/kg	202000	201000	581000	233000	386000	154000	80700
	Heavy Oils	NWTPH-Dx	NSA	mg/kg	321000	120000	255000	265000	306000	149000	67500
PCBs (mg/Kg)	Aroclor 1016	8082	NSA	mg/kg	< 0.43	0.943 UJ	<1.0	0.962 UJ	0.980 UJ	0.877 UJ	< 2.38
	Aroclor 1221	8082	NSA	mg/kg	< 0.43	0.943 UJ	<1.0	0.962 UJ	0.980 UJ	0.877 UJ	< 2.38
	Aroclor 1232	8082	NSA	mg/kg	< 0.43	0.943 UJ	<1.0	0.962 UJ	0.980 UJ	0.877 UJ	< 2.38
	Aroclor 1242	8082	NSA	mg/kg	< 0.43	0.943 UJ	<1.0	0.962 UJ	0.980 UJ	0.877 UJ	< 2.38
	Aroclor 1248	8082	NSA	mg/kg	< 0.43	0.943 UJ	<1.0	0.962 UJ	0.980 UJ	0.877 UJ	< 2.38
	Aroclor 1254	8082	NSA	mg/kg	< 0.43	0.943 UJ	<1.0	0.962 UJ	0.980 UJ	0.877 UJ	< 2.38
	Aroclor 1260	8082	NSA	mg/kg	0.37 J	0.943 UJ	<1.0	0.962 UJ	0.980 UJ	0.877 UJ	< 2.38
Carcinogenic PAH	Benzo(a)anthracene	8270C	NSA	mg/kg	40000	4.42	22.00	19.2 J	3.06 UJ	10.40	3.27
	Benzo(a)pyrene	8270C	NSA	mg/kg	25000	4.62	<15	8.57	11.0 J	3.96	< 2.73
	Benzo(b)fluoranthene	8270C	NSA	mg/kg	20000	2.88	<15	3.06	3.06 UJ	< 3.12	< 2.73
	Benzo(k)fluoranthene	8270C	NSA	mg/kg	3000 J	2.88	<15	3.06	3.06 UJ	< 3.12	< 2.73
	Chrysene	8270C	NSA	mg/kg	71000	9.04	30.00	45.7 J	50.6 J	23.1	7.27
	Dibenzo(a,h)anthracene	8270C	NSA	mg/kg	< 32000	9.62	<15	4.29	4.90 J	< 3.12	2.73
	Indeno(1,2,3-cd)pyrene	8270C	NSA	mg/kg	4700 J	10.2	<15	4.49	3.88 J	< 3.12	2.91
Non-Carcinogenic PAH (mg/Kg)	Acenaphthene	SIM 8270C	NSA	mg/kg	42000	29.2	372	33.1	100	30.2	16.5
	Acenaphthylene	SIM 8270C	NSA	mg/kg	< 16000	2.88	<15	3.06	3.06 UJ	< 3.12	< 2.73
	Anthracene	SIM 8270C	NSA	mg/kg	26000	33.5	209	96.9	120	50.4	20.2
	Benzo(g,h,i)perylene	SIM 8270C	NSA	mg/kg	6700 J	14.0	<15	9.59	12.2 J	3.12	3.64
	Fluoranthene	SIM 8270C	NSA	mg/kg	69000	8.27	56	9.18	15.1	9.38	4.00
	Fluorene	SIM 8270C	NSA	mg/kg	68000	45.6	316	86.3	178 J	45.6	25.3
	Naphthalene	SIM 8270C	NSA	mg/kg	< 16000	13.3	252	3.06	3.06 UJ	7.29	6.91
	Phenanthrene	SIM 8270C	NSA	mg/kg	140000	88.8	889	205	292	84.0	47.8
	Pyrene	SIM 8270C	NSA	mg/kg	110000	22.7	128	118	161 J	55.8	15.3
	1-Methylnaphthalene	SIM 8270C	NSA	mg/kg	52000	114	1350	15.3	328	63.1	47.6
	2-Methylnaphthalene	SIM 8270C	NSA	mg/kg	16000 J	48.3	1870	3.06	35.3	< 3.12	45.6
Total Metals (mg/Kg)	Aluminum	6010 / 6020	NSA	mg/kg	110 UJ	1500	39	360	340	120 J	85 J
	Arsenic	6010 / 6020	NSA	mg/kg	2.2 J	4.8 J	2	4.6 J	4.4 J	1.7 J	1.2 J
	Antimony	6010 / 6020	NSA	mg/kg	< 11	< 12	<8.6	< 12	< 12	< 13	< 11
	Barium	6010 / 6020	NSA	mg/kg	2.4	24	1.5	7.4	5.9	3.4	2.2
	Beryllium	6010 / 6020	NSA	mg/kg	< 0.88	0.055 J	<0.72	< 1.0	< 0.97	< 1.1	< 0.93
	Calcium	6010 / 6020	NSA	mg/kg	43 J	570	21	470	340	340	280
	Cadmium	6010 / 6020	NSA	mg/kg	< 1.8	< 2	<1.4	< 2	< 1.9	< 2.2	< 1.9
	Chromium	6010 / 6020	NSA	mg/kg	13 J	1.8 J	1.1	2.1 J	2.0 J	0.47 J	< 4.8
	Cobalt	6010 / 6020	NSA	mg/kg	0.48 J	1.8 J	0.13	0.65 J	0.56 J	0.28 J	< 1.9
	Copper	6010 / 6020	NSA	mg/kg	38 J	12	2.2	69	71	12	4.6
	Iron	6010 / 6020	NSA	mg/kg	120 J	2300	42	390	170	57	130
	Lead	6010 / 6020	NSA	mg/kg	15	3.2 J	<4.3	24	27	< 6.7	< 5.6
	Magnesium	6010 / 6020	NSA	mg/kg	190 U	800	6.7	220 U	210 U	250 U	200 U
	Manganese	6010 / 6020	NSA	mg/kg	1.6 J	31	0.78	8.7	2.9 J	1.4 J	1.2 J
	Mercury	7470A /	NSA	mg/kg	0.018	< 0.036	<0.018	0.034 J	0.034 J	0.019 J	0.013 J
	Nickel	6010 / 6020	NSA	mg/kg	31 J	9.7	11	39	34	20	4.6
	Potassium	6010 / 6020	NSA	mg/kg	580 UJ	290 J	<480	180 J	< 640	< 740	< 610
	Selenium	6010 / 6020	NSA	mg/kg	< 18	< 20	<14	1.6 J	0.63 J	< 22	< 19
	Silver	6010 / 6020	NSA	mg/kg	< 3.5	< 4	<2.9	< 4.1	< 3.9	< 4.5	< 3.7
	Sodium	6010 / 6020	NSA	mg/kg	< 350	780 J	<290	850	970	1100	1100
	Thallium	6010 / 6020	NSA	mg/kg	18 U	< 20	<14	< 20	< 19	< 22	< 19
	Vanadium	6010 / 6020	NSA	mg/kg	26 J	8.5	15	110	140	16	4.1
	Zinc	6010 / 6020	NSA	mg/kg	6.9 J	21	<7.2	67	15	12	5.6 J

Notes:

Bold - Detection is above media Screening Levels

NSA - No screening level available.

" < " - The analyte is not detected above the reporting quantitation limit.

U - Analyte not detected above the reported amount as a result of validation rules.

J - The analyte is positively identified. However, the result is an estimated value.

UJ - The analyte was not detected above the reporting quantitation limit. However the reporting limit is approximate.

R - The data is rejected due to a deficiency in quality control criteria.

Type	Analytes	Method	Sample ID	Sample Type	Sample Date	Sample Location	Sample Depth	Sample Volume	Sample Weight	Sample pH	Sample Temperature	Sample Salinity	Sample Dissolved Oxygen	Sample Turbidity	Sample Conductivity	Sample Nitrate	Sample Nitrite	Sample Chloride	Sample Sulfate	Sample Dissolved Solids	Sample Dissolved Silica	Sample Dissolved Iron	Sample Dissolved Manganese	Sample Dissolved Zinc	Sample Dissolved Cadmium	Sample Dissolved Lead	Sample Dissolved Arsenic	Sample Dissolved Antimony	Sample Dissolved Barium	Sample Dissolved Beryllium	Sample Dissolved Calcium	Sample Dissolved Chromium	Sample Dissolved Cobalt	Sample Dissolved Copper	Sample Dissolved Iron	Sample Dissolved Lead	Sample Dissolved Magnesium	Sample Dissolved Manganese	Sample Dissolved Mercury	Sample Dissolved Nickel	Sample Dissolved Potassium	Sample Dissolved Selenium	Sample Dissolved Silver	Sample Dissolved Sodium	Sample Dissolved Thallium	Sample Dissolved Vanadium	Sample Dissolved Zinc
TPH	Diesel Range Organics	NWTPH-Dx	NSA	mg/kg dry	ND	66.3	74.3	62.4	194	403	8830	39.6	73.1	24.3	22.4	25.3	< 14.9	< 11.8	< 14.7	< 12.5																											
	Heavy Oils	NWTPH-Dx	NSA	mg/kg dry	89	464	336	272	492	588	6980	164	178	112	140	126	< 37.3	< 29.6	< 36.7	< 31.3																											
PCBs	Aroclor 1016	8082	0.026	mg/kg dry	0.0097 UJ	0.0097 UJ	0.0098 UJ	0.0096 UJ	<0.0096	< 0.010	<0.0097	<0.0096	< 0.010	<0.010	<0.010	<0.010	<0.0098	0.0095 UJ	0.0099 UJ	0.0095 UJ																											
	Aroclor 1221	8082	0.026	mg/kg dry	0.0097 UJ	0.0097 UJ	0.0098 UJ	0.0096 UJ	<0.0096	< 0.010	<0.0097	<0.0096	< 0.010	<0.010	<0.010	<0.010	<0.0098	0.0095 UJ	0.0099 UJ	0.0095 UJ																											
	Aroclor 1232	8082	0.026	mg/kg dry	0.0097 UJ	0.0097 UJ	0.0098 UJ	0.0096 UJ	<0.0096	< 0.010	<0.0097	<0.0096	< 0.010	<0.010	<0.010	<0.010	<0.0098	0.0095 UJ	0.0099 UJ	0.0095 UJ																											
	Aroclor 1242	8082	0.026	mg/kg dry	0.0097 UJ	0.0097 UJ	0.0098 UJ	0.0096 UJ	<0.0096	< 0.010	<0.0097	<0.0096	< 0.010	<0.010	<0.010	<0.010	<0.0098	0.0095 UJ	0.0099 UJ	0.0095 UJ																											
	Aroclor 1248	8082	0.026	mg/kg dry	0.0097 UJ	0.0097 UJ	0.0098 UJ	0.0096 UJ	<0.0096	< 0.010	<0.0097	<0.0096	< 0.010	<0.010	<0.010	<0.010	<0.0098	0.0095 UJ	0.0099 UJ	0.0095 UJ																											
	Aroclor 1254	8082	0.026	mg/kg dry	0.0097 UJ	0.0097 UJ	0.0098 UJ	0.0096 UJ	<0.0096	< 0.010	<0.0097	<0.0096	< 0.010	<0.010	<0.010	<0.010	<0.0098	0.0095 UJ	0.0099 UJ	0.0095 UJ																											
	Aroclor 1260	8082	0.026	mg/kg dry	0.0097 UJ	0.010 J	0.0098 UJ	0.0096 UJ	<0.0096	< 0.010	<0.0097	<0.0096	< 0.010	<0.010	<0.010	<0.010	<0.0098	0.0095 UJ	0.0099 UJ	0.0095 UJ																											
Carcinogenic PAH	Benzo(a)anthracene	8270C	0.016	mg/kg dry	0.00494 UJ	0.0085 R	0.00498 UJ	0.00841 R	0.00471 R	0.0709 J	0.00947 R	< 0.00477	0.0326	0.00586	< 0.00462	< 0.00499	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ																											
	Benzo(a)pyrene	8270C	0.032	mg/kg dry	0.00494 UJ	0.0085 R	0.00498 UJ	0.00841 R	0.0101 J	0.0333 J	0.0455 J	< 0.00477	0.0774	0.00521	< 0.00462	0.00499 R	0.00497 UJ	0.00489 UJ	0.00417 UJ																												
	Benzo(b)fluoranthene	8270C	0.027	mg/kg dry	0.0155 J	0.0147 J	0.00498 UJ	0.00841 R	0.00471 R	0.0388 J	0.00947 R	< 0.00477	0.143	< 0.00488	< 0.00462	0.00499 R	0.0053 J	0.00473 UJ	0.00489 UJ	0.00417 UJ																											
	Benzo(k)fluoranthene	8270C	0.027	mg/kg dry	0.00494 UJ	0.0085 R	0.00498 UJ	0.00841 R	0.00471 R	0.00831 R	0.0467 J	< 0.00477	< 0.00498	0.01040	< 0.00462	0.00499 R	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ																											
	Chrysene	8270C	0.027	mg/kg dry	0.00941 J	0.00907 J	0.00498 UJ	0.00841 R	0.0101 J	0.129 J	0.0455 J	< 0.00477	0.0625	0.00976	< 0.00462	< 0.00499	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ																											
	Dibenzo(a,h)anthracene	8270C	0.006	mg/kg dry	0.00494 UJ	0.00907 J	0.00745 J	0.00897 J	0.0151 J	0.0111 J	0.0152 J	0.00796	0.037	< 0.00488	< 0.00462	0.00499 R	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ																											
	Indeno(1,2,3-cd)pyrene	8270C	0.017	mg/kg dry	0.00494 UJ	0.0113 J	0.00881 J	0.00841 R	0.0182 J	0.0144 J	0.00849	0.0746	< 0.00488	< 0.00462	0.00499 R	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ																												
	Acenaphthene	SIM 8270C	0.0067	mg/kg dry	0.00494 UJ	0.0085 UJ	0.00498 UJ	0.00841 UJ	0.0101	0.1030	< 0.00947	< 0.00477	0.0453	< 0.00488	< 0.00462	< 0.00499	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ																											
	Acenaphthylene	SIM 8270C	0.0059	mg/kg dry	0.00494 UJ	0.0085 UJ	0.00498 UJ	0.00841 UJ	<0.00471	< 0.00831	< 0.00947	< 0.00477	< 0.00498	< 0.00468	< 0.00462	< 0.00499	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ																											
Non-Carcinogenic PAH	Anthracene	SIM 8270C	0.01	mg/kg dry	0.00494 UJ	0.0085 UJ	0.00498 UJ	0.00841 UJ	0.00817	0.1200	< 0.00947	< 0.00477	0.0122	< 0.00488	< 0.00462	< 0.00499	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ																											
	Benzo(g,h,i)perylene	SIM 8270C	0.17	mg/kg dry	0.00672 J	0.0193 J	0.0115 J	0.0112 J	0.0277 J	0.0299 J	0.0101 J	0.0101	0.106	0.00586	< 0.00462	0.00499 R	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ																											
	Fluoranthene	SIM 8270C	0.031	mg/kg dry	0.00874 J	0.0085 UJ	0.00498 UJ	0.00841 UJ	<0.00471	0.0521	0.0189 J	< 0.00477	0.0293	0.00716	0.00616	< 0.00499	0.0139 J	0.00473 UJ	0.00489 UJ	0.00417 UJ																											
	Fluorene	SIM 8270C	0.01	mg/kg dry	0.00494 UJ	0.0085 UJ	0.00498 UJ	0.00841 UJ	0.0151	0.0998	< 0.00947	< 0.00477	0.084	< 0.00488	< 0.00462	< 0.00499	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ																											
	Naphthalene	SIM 8270C	0.015	mg/kg dry	0.00494 UJ	0.0085 UJ	0.00498 UJ	0.00841 UJ	<0.00471	< 0.00831	< 0.00947	< 0.00477	0.0122	< 0.00488	< 0.00462	< 0.00499	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ																											
	Phenanthrene	SIM 8270C	0.019	mg/kg dry	0.00494 UJ	0.0085 UJ	0.00498 UJ	0.00841 UJ	0.0214	0.3540	0.0202 J	< 0.00477	0.0802	< 0.00488	< 0.00462	< 0.00499	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ																											
	Pyrene	SIM 8270C	0.044	mg/kg dry	0.00887	0.0204 J	0.00498 UJ	0.00841 R	0.027 J	0.44 J	0.00636	0.129	0.01430	0.00555	< 0.00499	0.0119 J	0.00473 UJ	0.00489 UJ	0.00417 UJ																												
	1-Methylnaphthalene	SIM 8270C	NSA	mg/kg dry	0.00494 UJ	0.0085 UJ	0.00498 UJ	0.00841 UJ	0.0176	0.0964	< 0.00947	< 0.00477	0.101	< 0.00488	< 0.00462	< 0.00499	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ																											
	2-Methylnaphthalene	SIM 8270C	0.02	mg/kg dry	0.00494 UJ	0.0085 UJ	0.00498 UJ	0.00841 UJ	<0.00471	< 0.00831	< 0.00947	< 0.00477	0.00498	< 0.00488	< 0.00462	< 0.00499	0.00497 UJ	0.00473 UJ	0.00489 UJ	0.00417 UJ																											
Total Metals	Aluminum	6010 / 6020	25500	mg/kg dry	5300	4700	6700	4100	5100	5000	4600	3900	5000	6900	6900	6500	6900	3300	7000	5400																											

Notes

Screening level for PCBs is for total PCB concentration.

Bold - Detection is above media Screening Levels

NSA - No screening level available.

"<" - The analyte is not detected above the reporting quantitation limit.

U - Analyte not detected above the reported amount as a result of validation rules.

J - The analyte is positively identified. However, the result is an estimate.

J - The analyte is positively identified. However, the result is an estimated value.
U/I - The analyte was not detected above the reporting quantitation limit. However, a blank control sample also did not contain the analyte.

R - The data is rejected due to a deficiency in quality control criteria.

R - The data is rejected due to a deficiency in quality control criteria.

TABLE 6

Near Shore Sediment Results

Type	Analytes	Method	Near Shore Sediment Results																				
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Semivolatiles	1-Methylnaphthalene	8270C	NSA	mg/kg dry	< 0.043	0.0086 J	0.0098	0.0056	0.05	0.11	5	0.0033 J	0.087	0.0063	0.0015 J	0.00097 J	< 0.0043	< 0.0036	< 0.0044	< 0.0027 J			
	2,6-Dinitrotoluene	8270C	NSA	mg/kg dry	< 0.029	< 0.024	< 0.014	< 0.013	< 0.14	< 0.12	< 0.12	< 0.11	< 0.012	< 0.014	< 0.013	0.0031 J	< 0.014	< 0.012	< 0.015	< 0.012			
	2-Chloronaphthalene	8270C	NSA	mg/kg dry	< 0.14	< 0.12	0.0013 J	0.0037	< 0.027	< 0.023	< 0.024	< 0.023	< 0.0024	< 0.0028	< 0.0026	< 0.0029	< 0.0029	< 0.0024	< 0.0029	< 0.0023			
	2-Methylnaphthalene	8270C	0.020	mg/kg dry	0.0069 J	0.021 J	0.019	0.011	0.0055 J	0.016 J	0.47	0.0048 J	< 0.0024	0.013	0.0028	0.002 J	0.00044 J	0.00035 J	< 0.0029	< 0.0029	0.00071 J		
	3 & 4 Methylphenol	8270C	NSA	mg/kg dry	< 0.29	< 0.24	0.0023 J	< 0.025	< 0.27	< 0.23	< 0.24	< 0.23	< 0.024	< 0.026	< 0.026	0.002 J	0.0071 J	< 0.024	< 0.029	< 0.023			
	Acenaphthene	8270C	0.0067	mg/kg dry	< 0.029	< 0.024	0.0016 J	< 0.0025	0.032	0.18	1.9	< 0.023	0.041	0.0031	< 0.0026	< 0.0029	< 0.0029	< 0.0024	< 0.0029	< 0.0023			
	Acenaphthylene	8270C	0.0059	mg/kg dry	< 0.029	< 0.024	0.0025 J	0.0046	< 0.027	< 0.023	< 0.024	< 0.023	< 0.0024	< 0.0025	0.00098 J	< 0.0029	< 0.0029	< 0.0024	< 0.0029	< 0.0023			
	Anthracene	8270C	0.057	mg/kg dry	0.0078 J	0.014 J	0.0034	0.0057	0.017 J	0.1	0.23	< 0.023	0.01	0.0036	0.002 J	0.00081 J	0.0012 J	0.00036 J	< 0.0029	< 0.0023			
	Benzo(a)anthracene	8270C	0.11	mg/kg dry	0.04	0.012 J	0.0034 J	0.0029 J	< 0.034	0.1	0.48	< 0.028	0.0059	0.0089	0.0058	0.00042 J	0.0022 J	0.00066 J	0.00087 J	< 0.0029			
	Benzo(a)pyrene	8270C	0.15	mg/kg dry	0.0066 J	< 0.036	0.0052	0.0064	< 0.041	0.097	< 0.035	< 0.034	0.0069	0.0074	0.0062	0.00098 J	< 0.0043	< 0.0036	< 0.0044	< 0.0035			
	Benzo(b)fluoranthene	8270C	0.027	mg/kg dry	< 0.029	< 0.024	0.0069	0.013	< 0.027	0.078	< 0.024	< 0.023	0.0052	0.018	0.01	0.0015 J	0.0024 J	< 0.0024	< 0.0029	< 0.0023			
	Benzo(g,h,i)perylene	8270C	0.17	mg/kg dry	< 0.036	0.022 J	0.0074	0.015	0.028 J	0.038	0.12	< 0.028	0.005	0.009	0.0049	0.0023 J	< 0.0036	< 0.0030	< 0.0037	< 0.0029			
	Benzo(k)fluoranthene	8270C	0.24	mg/kg dry	< 0.036	< 0.030	0.0016 J	0.0015 J	< 0.034	0.027 J	< 0.030	< 0.028	< 0.0030	0.0037	0.0022 J	0.00061 J	< 0.0036	< 0.0030	< 0.0037	< 0.0029			
	Benzoic acid	8270C	0.65	mg/kg dry	< 3.6	< 3.0	0.099 J	0.12 J	< 3.4	< 2.9	< 3.0	< 2.8	< 0.30	0.11	< 0.33	< 0.37	< 0.36	< 0.30	< 0.37	< 0.29			
	Benzyl alcohol	8270C	NSA	mg/kg dry	< 0.14	< 0.12	< 0.014	< 0.013	< 0.14	< 0.12	< 0.12	< 0.11	< 0.012	< 0.014	< 0.013	< 0.015	< 0.014	< 0.012	0.0017 J	< 0.012			
	Bis(2-ethylhexyl)phthalate	8270C	0.18	mg/kg dry	< 2.1	< 1.8	< 0.21	0.0078 J	< 2.1	< 1.8	< 1.8	< 1.7	< 0.18	0.0076	0.01 J	0.0068 J	< 0.22	< 0.18	< 0.22	< 0.17			
	Carbazole	8270C	NSA	mg/kg dry	< 0.21	< 0.18	0.0013 J	0.0023 J	< 0.21	< 0.18	< 0.18	< 0.17	< 0.018	0.0024	0.0011 J	< 0.022	< 0.022	< 0.018	< 0.022	0.00075 J			
	Chrysene	8270C	0.166	mg/kg dry	0.0098 J	0.029 J	0.0083	0.016	< 0.034	0.29	1	0.0035 J	0.013	0.021	0.0085	0.0033 J	0.0054	< 0.0030	< 0.0037	< 0.0029			
	Dibenz(a,h)anthracene	8270C	0.033	mg/kg dry	< 0.057	< 0.047	0.0017 J	< 0.0051	< 0.055	< 0.047	< 0.047	< 0.046	< 0.0048	0.0026	0.0017 J	< 0.0059	< 0.0058	< 0.0048	< 0.0059	< 0.0047			
	Dibenzofuran	8270C	0.42	mg/kg dry	< 0.14	0.015 J	0.0032 J	0.003 J	< 0.14	< 0.12	< 0.12	< 0.11	< 0.012	0.0064	0.00093 J	< 0.015	< 0.014	< 0.012	< 0.015	< 0.012			
	Diethylphthalate	8270C	0.60	mg/kg dry	< 0.14	< 0.12	< 0.014	0.013 U	< 0.14	< 0.12	< 0.12	< 0.11	< 0.012	0.014 U	0.013 U	< 0.015	0.014 U	0.012 U	0.015 U	< 0.012 U			
	Di-n-butyl phthalate	8270C	0.11	mg/kg dry	< 0.29	< 0.24	0.028 U	0.025 U	< 0.27	< 0.23	< 0.24	< 0.23	< 0.024	0.028 U	0.026 U	0.029 U	0.029 U	0.024 U	0.029 U	0.023 U			
	Di-n-octyl phthalate	8270C	NSA	mg/kg dry	< 0.29	< 0.24	0.0018 J	< 0.025	< 0.025	< 0.27	< 0.23	< 0.24	< 0.024	0.0039	< 0.026	< 0.029	< 0.024	< 0.029	< 0.023				
	Fluoranthene	8270C	0.42	mg/kg dry	0.016 J	0.04	0.0065	0.0045	< 0.027	0.15	0.68	0.0065 J	0.0078	0.013	0.014	0.0016 J	0.014	0.00036 J	0.0011 J	0.00066 J			
	Fluorene	8270C	0.077	mg/kg dry	< 0.029	< 0.024	< 0.0028	< 0.0025	0.059	0.17	3.1	< 0.023	0.08	0.0047	< 0.0026	< 0.0029	< 0.0024	< 0.0029	< 0.0023				
	Indeno(1,2,3-cd)pyrene	8270C	0.017	mg/kg dry	0.024 J	0.035 J	0.0043 J	0.0064	< 0.055	0.025 J	< 0.047	< 0.046	0.0023 J	0.0053	0.004 J	0.0016 J	< 0.0058	< 0.0048	< 0.0059	< 0.0047			
	Isophorone	8270C	NSA	mg/kg dry	< 0.14	< 0.12	< 0.014	< 0.013	< 0.14	&													

TABLE 7

Near Shore Surface Water Results

Type	Analytes	Method	Screening Level ug/L	Sample ID	G-RS1SW-090609	G-RS2SW-090609	G-RS3SW-090609	G-RS4SW-090609	G-RS5SW-090609	G-RS5SW-090609	G-RS6SW-090609	G-RS7SW-090609	G-RS8SW-090609
				Collection Date	9/6/2009	9/6/2009	9/6/2009	9/6/2009	9/6/2009	9/6/2009	9/6/2009	9/6/2009	9/6/2009
TPH	Diesel Range Organics	NWTPH-DX	NSA	ug/L	< 250	< 260	< 266	< 248	< 240	---	< 278	< 245	< 240
	Heavy Oils	NWTPH-DX	NSA	ug/L	< 500	< 521	< 532	< 495	< 481	---	< 556	< 490	< 481
PCBs	Aroclor 1016	8082	0.000064	ug/L	< 0.050	< 0.048	< 0.049	< 0.050	< 0.047	---	< 0.050	< 0.049	< 0.048
	Aroclor 1221	8082	0.000064	ug/L	< 0.050	< 0.048	< 0.049	< 0.050	< 0.047	---	< 0.050	< 0.049	< 0.048
	Aroclor 1232	8082	0.000064	ug/L	< 0.050	< 0.048	< 0.049	< 0.050	< 0.047	---	< 0.050	< 0.049	< 0.048
	Aroclor 1242	8082	0.000064	ug/L	< 0.050	< 0.048	< 0.049	< 0.050	< 0.047	---	< 0.050	< 0.049	< 0.048
	Aroclor 1248	8082	0.000064	ug/L	< 0.050	< 0.048	< 0.049	< 0.050	< 0.047	---	< 0.050	< 0.049	< 0.048
	Aroclor 1254	8082	0.000064	ug/L	< 0.050	< 0.048	< 0.049	< 0.050	< 0.047	---	< 0.050	< 0.049	< 0.048
	Aroclor 1260	8082	0.000064	ug/L	< 0.050	< 0.048	< 0.049	< 0.050	< 0.047	---	< 0.050	< 0.049	< 0.048
	Benz(a)anthracene	8270C	0.0038	ug/L	< 0.0096	< 0.0099	< 0.0094	0.0077 J	< 0.011	---	< 0.01	< 0.0095	< 0.0095
Carcinogenic PAH	Benz(a)pyrene	8270C	0.0038	ug/L	< 0.019	< 0.02	< 0.019	< 0.02	< 0.022	---	< 0.02	< 0.019	< 0.019
	Benz(b)fluoranthene	8270C	0.0038	ug/L	< 0.0096	< 0.0099	< 0.0094	< 0.0099	< 0.011	---	< 0.01	< 0.0095	< 0.0095
	Benz(k)fluoranthene	8270C	0.0038	ug/L	< 0.0096	< 0.0099	< 0.0094	< 0.0099	< 0.011	---	< 0.01	< 0.0095	< 0.0095
	Chrysene	8270C	0.0038	ug/L	< 0.0096	< 0.0099	< 0.0094	0.015	< 0.011	---	< 0.01	< 0.0095	< 0.0095
	Dibenzo(a,h)anthracene	8270C	0.0038	ug/L	< 0.0096	< 0.0099	< 0.0094	< 0.0099	< 0.011	---	< 0.01	< 0.0095	< 0.0095
	Indeno(1,2,3-cd)pyrene	8270C	0.0038	ug/L	< 0.0096	< 0.0099	< 0.0094	< 0.0099	< 0.011	---	< 0.01	< 0.0095	< 0.0095
	Acenaphthene	SIM 8270C	670	ug/L	0.0012 J	0.0099 U	0.0094 U	0.044	0.059	---	0.0025 J	0.0095 U	0.0017 J
	Acenaphthylene	SIM 8270C	NSA	ug/L	< 0.0096	< 0.0099	< 0.0094	0.0094 J	0.0071 J	---	< 0.01	0.0015 J	< 0.0095
Non-Carcinogenic PAH	Anthracene	SIM 8270C	8300	ug/L	0.0011 J	0.0099 U	0.0094 U	0.021	0.0049 J	---	0.0015 J	0.0095 U	0.0011 J
	Benz(g,h,i)perylene	SIM 8270C	NSA	ug/L	< 0.0096	< 0.0099	< 0.0094	< 0.0099	< 0.011	---	< 0.01	< 0.0095	< 0.0095
	Fluoranthene	SIM 8270C	130	ug/L	0.0020 J	0.0099 U	0.0094 U	0.017	0.0038 J	---	0.0025 J	0.0095 U	0.0022 J
	Fluorene	SIM 8270C	1100	ug/L	0.0026 J	0.0099 U	0.0094 U	0.13	0.097	---	0.0045 J	0.0095 U	0.0026 J
	Naphthalene	SIM 8270C	NSA	ug/L	< 0.0096	< 0.0099	< 0.0094	0.0099 U	0.054	---	< 0.01	< 0.0095	< 0.0095
	Phenanthrene	SIM 8270C	NSA	ug/L	0.0040 J	0.0099 U	0.0094 U	0.21	0.035	---	0.0085 J	0.0095 U	0.0033 J
	Pyrene	SIM 8270C	830	ug/L	< 0.0096	0.0099 U	0.0094 U	0.039	0.0049 J	---	0.0022 J	0.0095 U	0.0023 J
	1-Methylnaphthalene	SIM 8270C	NSA	ug/L	0.0024 J	0.0099 U	0.0094 U	0.11	0.21	---	0.0056 J	0.0095 U	0.0041 J
	2-Methylnaphthalene	SIM 8270C	NSA	ug/L	< 0.012	< 0.013	< 0.012	0.013 U	0.013 J	---	< 0.013	< 0.012	< 0.012
Total Metals	Aluminum	6010 / 6020	NSA	ug/L	< 500	< 500	< 500	< 500	---	< 500	< 500	< 500	< 500
	Arsenic	6010 / 6020	50	ug/L	< 2	< 2	< 2	< 2	0.52 J	---	1.1 J	< 2	< 2
	Antimony	6010 / 6020	5.6	ug/L	< 2	< 2	< 2	< 2	< 2	---	< 2	< 2	< 2
	Barium	6010 / 6020	NSA	ug/L	7.9	8.1	7.2	7.9	13	---	8	7.6	7.2
	Beryllium	6010 / 6020	NSA	ug/L	< 2	< 2	< 2	< 2	< 2	---	< 2	< 2	< 2
	Calcium	6010 / 6020	NSA	ug/L	12000	12000	11000	11000	15000	---	11000	11000	11000
	Cadmium	6010 / 6020	0.6	ug/L	< 2	< 2	< 2	< 2	< 2	---	< 2	< 2	< 2
	Chromium	6010 / 6020	74	ug/L	0.46 J	< 2	< 2	0.44 J	< 2	---	0.38 J	0.42 J	0.51 J
	Cobalt	6010 / 6020	NSA	ug/L	< 2	< 2	< 2	< 2	< 2	---	< 2	< 2	< 2
	Copper	6010 / 6020	11	ug/L	0.75 J	0.9 J	0.74 J	0.78 J	0.8 J	---	0.84 J	0.76 J	0.77 J
	Iron	6010 / 6020	NSA	ug/L	< 200	51 J	< 200	41 J	1700	590	68 J	< 200	< 200
	Lead	6010 / 6020	2.5	ug/L	< 2	< 2	< 2	< 2	< 2	---	< 2	< 2	< 2
	Magnesium	6010 / 6020	NSA	ug/L	2500	2400	2400	2300	3000	---	2300	2300	2300
	Manganese	6010 / 6020	NSA	ug/L	< 20	< 20	< 20	11 J	160	130	11 J	7.6 J	1.9 J
	Mercury	7470A / 7471B	NSA	ug/L	< 0.2	0.12 J	< 0.2	< 0.2	< 0.2	---	0.12 J	< 0.2	< 0.2
	Nickel	6010 / 6020	52	ug/L	0.53 J	0.52 J	0.46 J	0.38 J	0.58 J	---	0.46 J	0.47 J	0.39 J
	Potassium	6010 / 6020	NSA	ug/L	660 J	670 J	680 J	660 J	760 J	---	680 J	690 J	680 J
	Selenium	6010 / 6020	5	ug/L	< 2	< 2	< 2	< 2	< 2	---	< 2	< 2	< 2
	Silver	6010 / 6020	3.4	ug/L	< 2	< 2	< 2	< 2	< 2	---	< 2</		

FIGURES

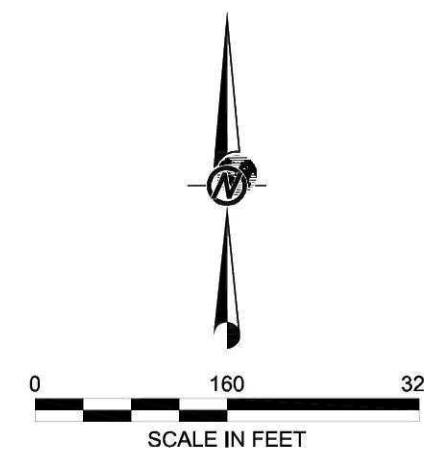
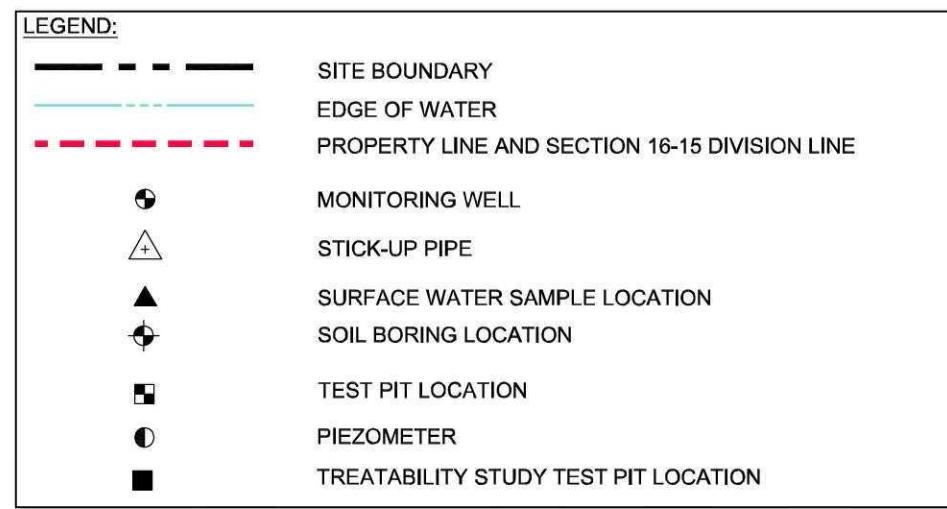
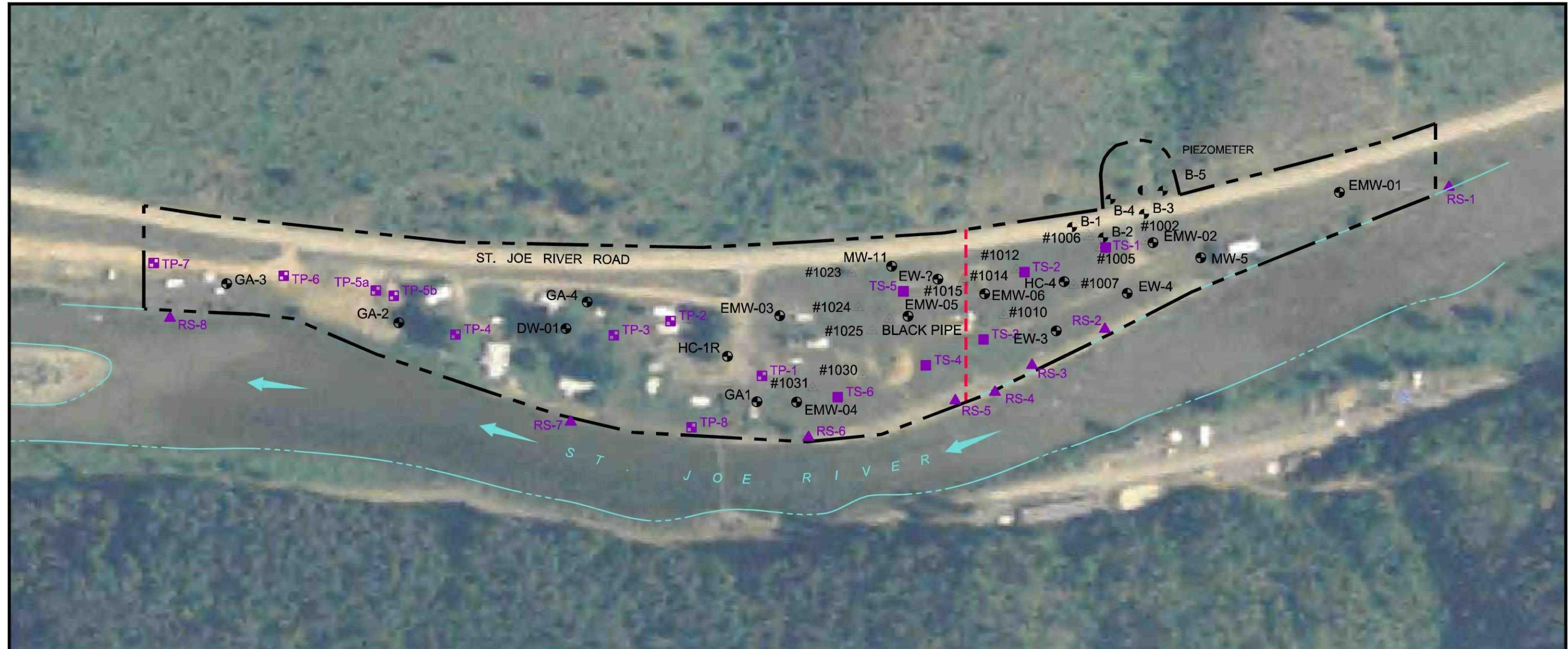
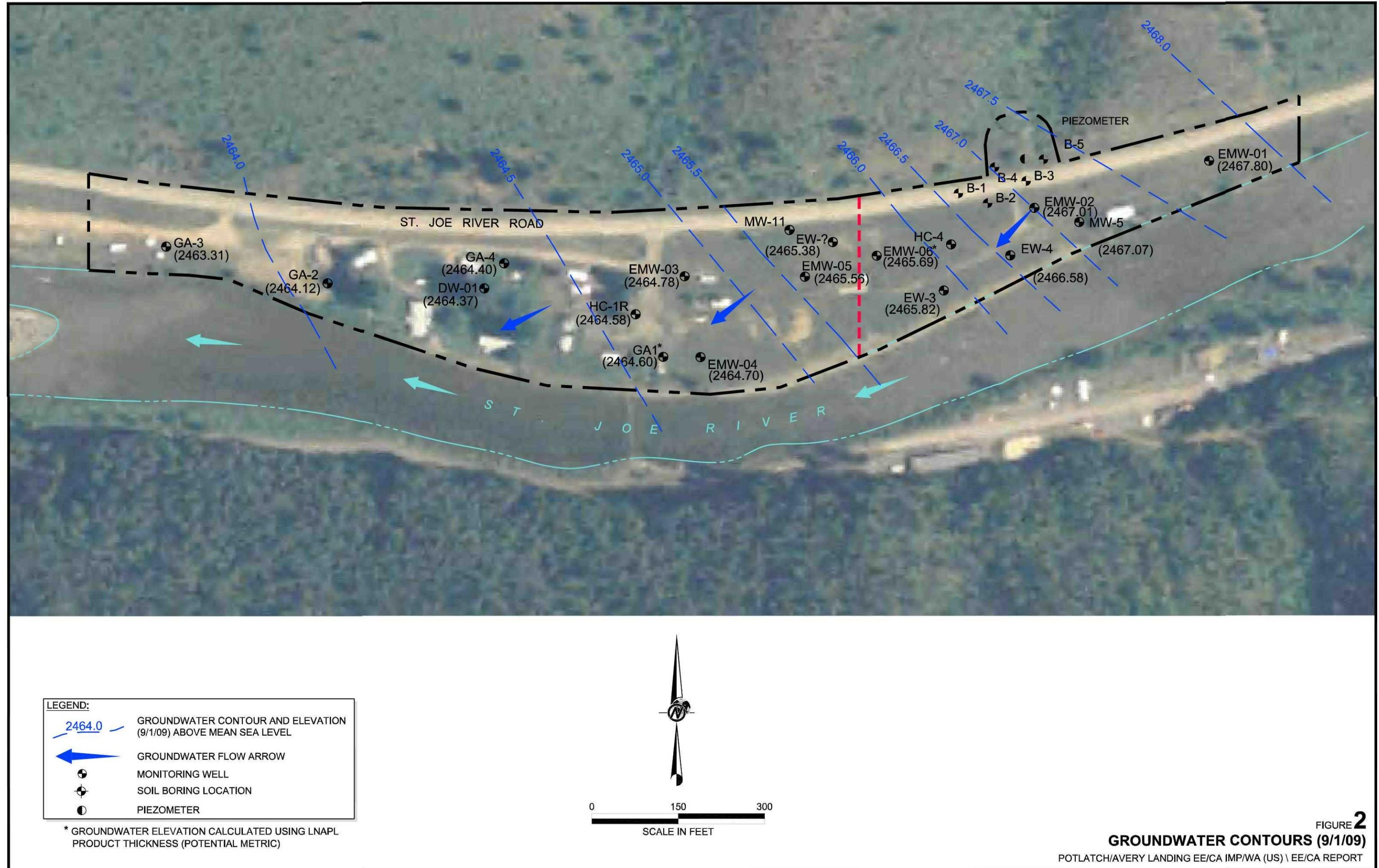


FIGURE 1
EE/CA SAMPLING LOCATIONS MAP
POTLATCH/AVERY LANDING EE/CA IMP/WA (US) \ EE/CA REPORT



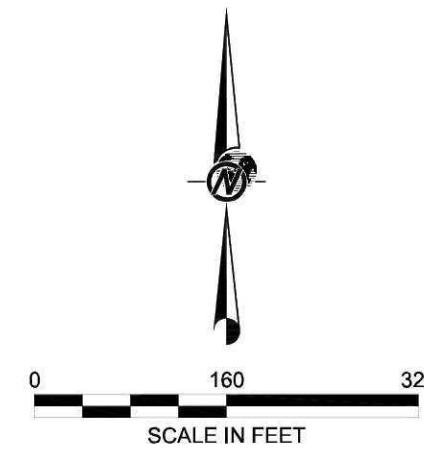
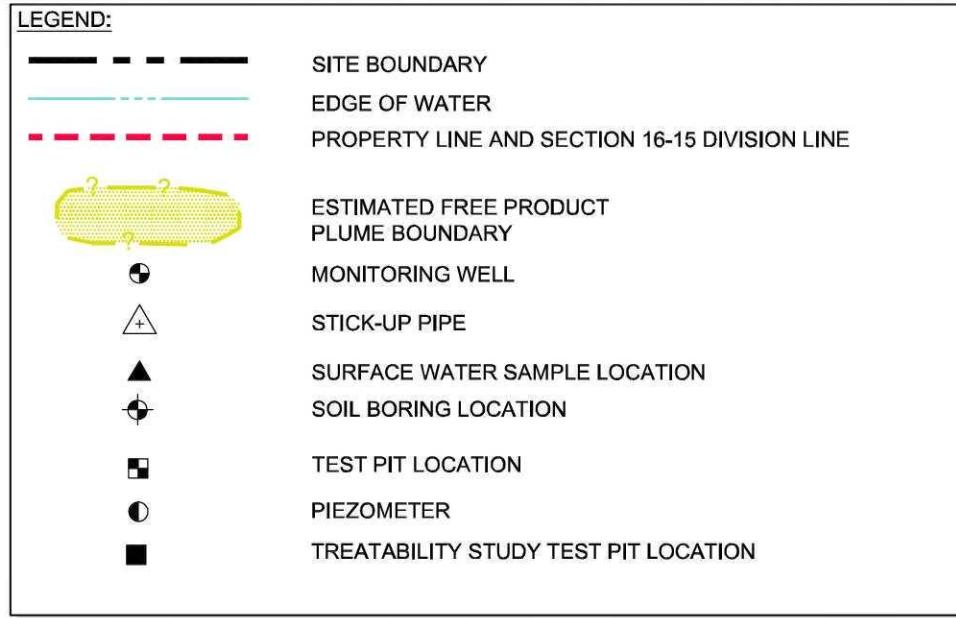
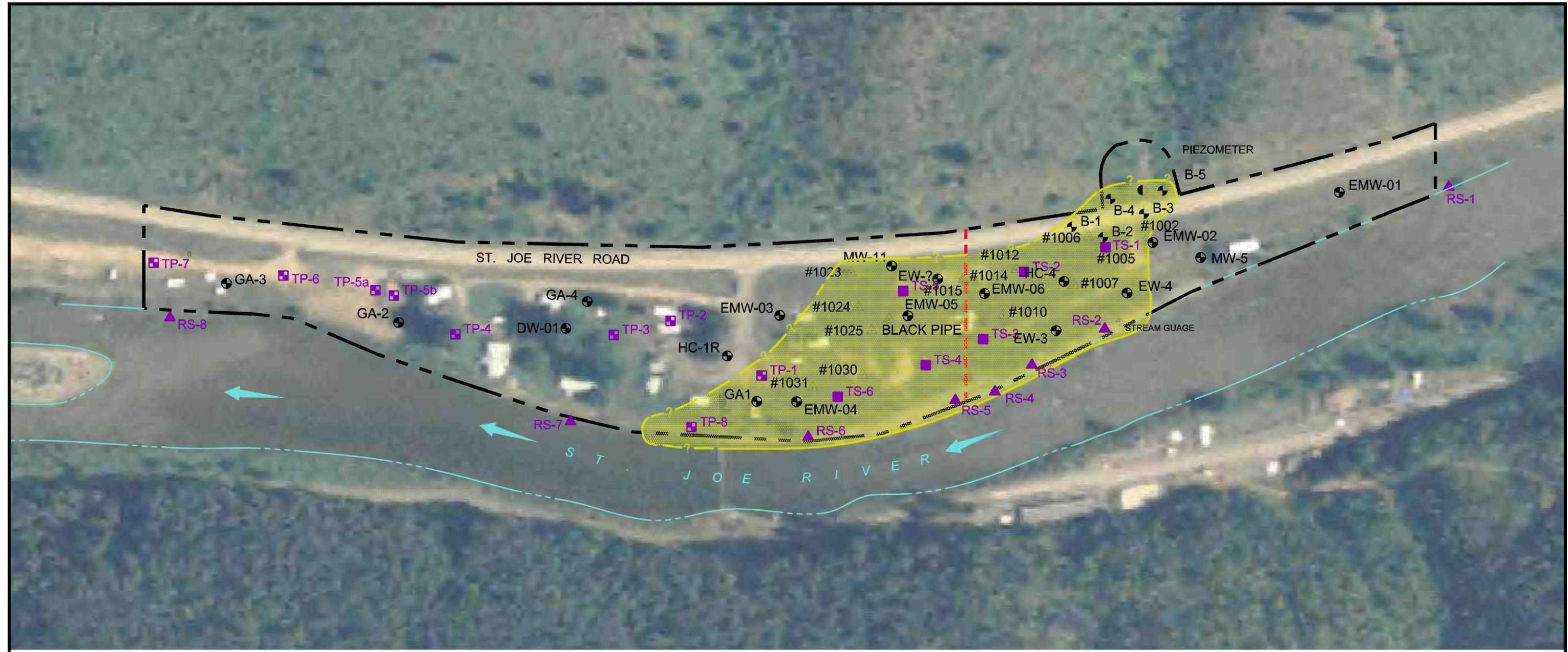


FIGURE 3

FREE PRODUCT PLUME

POTLATCH/AVERY LANDING EE/CA IMP/WA (US) \ EE/CA REPORT

Golder Associates